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City of Cambridge.

THE

MAYOR'S ADDRESS

AT THE

Organization of the City Government,

AND THE

ANNUAL REPORTS

MADE TO

THE CITY COUNCIL.

CAMBRIDGE:
TRIBUNE PUBLISHING COMPANY.
1882.

City of Cambridge.

In Common Council, Dec. 15, 1880.

Ordered, That the Committee on Printing be authorized and instructed to obtain proposals, and to make a contract, for the printing of fifteen hundred copies of the Annual Report of the Committee on Finance to be made during the current month, with the accompanying documents, and such other documents as shall be ordered to be printed, including the inaugural address of the Mayor elect; said documents to be printed under the supervision of the City Clerk, and under the direction of the Committee on Printing.

The proposals and contract aforesaid to include the Mayor's address, and all other documents ordered to be printed, whether bound together or separately. The expense of such printing to be charged to the appropriation for stationery and printing.

A true copy of the order as adopted by the City Council, and approved by the Mayor, Dec. 22, 1881.

Attest: JUSTIN A. JACOBS,
City Clerk.

Ebenezer Smood Chr. 1891
31.320

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ADDRESS

OF

HON. JAMES A. FOX,

MAYOR.

Gentlemen of the City Council: —

It is with much satisfaction that I present my congratulations, not only to the exact quorum of members of both boards in last year's City Council, which has been wisely returned to serve another year, but to the newly elected members as well, who to-day assume the responsible duties of municipal government perhaps for the first time.

In accordance with the provisions of our charter, the administration of all the fiscal and prudential affairs of the city of Cambridge is vested in one principal officer and two concurrently acting boards, denominated the City Council.

Having been selected by the suffrages of our fellow-citizens for these several positions, to us, therefore, are committed the varied interests of our people, which include the protection of person and property, the safety of traffic and travel, the freedom of labor and capital, the preservation of the public health, the care of the poor and destitute, and the advancement of education and morality.

For the second time called to the position of principal officer, it is again my duty, by the terms of the charter, to direct your attention to the condition of the departments over which you are to assume control, and to give such information therewith as may be of value to you.

Before I proceed, however, to the consideration of these affairs, it is incumbent upon me to allude to the great and unusual sorrow which our citizens, in common with the people of the whole country, have suffered during the past year by the afflictive death of our late beloved President. Can we ever forget that solemn tolling of the bells at midnight on the 19th of September, which announced to our sleeping citizens the death of one of the most capable, experienced, and promising Chief Magistrates with whom our nation has been blessed? I had the favor, together with the President of the Common Council, to represent you on the occasion of the imposing funereal honors that were paid to the remains of President Garfield in the national capital, where he was so causelessly struck down.

In the all-wise providence of God, one of the compensating results of the terrible affliction was the tender and heartfelt sympathy which the long suffering of the President, so heroically and hopefully borne for eighty days, called out from the monarchs and peoples of most of the nations of the earth. It touched a chord in our hearts that vibrated responsively, and made us feel akin.

While we bow in submission to the sorrowful stroke, we should also trust that as God was with our fathers, so he will be with us; and that whether as a nation or

a city, we exist under his divine care and constant protection.

FINANCES.

It gives me much pleasure to say that the financial policy established and carried on under the administrations of my three immediate and able predecessors has been continued the past year, with most gratifying results. From an examination of the books of the Treasurer and Auditor, I find the condition of the finances, at the end of the financial year, Nov. 30, 1881, to be as follows: —

RECEIPTS AND EXPENDITURES.

Cash in hands of Treasurer, Nov. 30, 1880	$29,742 47
Cash received from all sources to Nov. 30, 1881	1,923,509 17
Total receipts for the year	$1,953,251 64
Expenditures for the year	1,949,966 49
Cash balance, Nov. 30, 1881	$3,285 15

APPROPRIATION.

The appropriation for 1881 was: —

Cash	$913,140 00
Estimated revenue	249,390 00
Used of excess of estimated revenue	2,000 00
Total	$1,164,530 00

LIABILITIES OF THE CITY.

State tax (due in December)	$52,155 00
County tax (due in December)	26,208 53
National Bank tax, non-residents.	4,857 76
License fees (one quarter to the State)	4,918 75
Dowse Institute Fund	10,000 00
Sanders Temperance Fund	10,000 00
Daniel White Charity Fund	5,000 00
Fay Fund (Cambridge Public Library)	1,000 00
Cemetery Fund, for perpetual care of lots	3,250 00
Total liabilities	$117,390 04

ASSETS OF THE CITY.

Cash in treasury	$3,285 15
Bills receivable, secured by mortgage on real estate	19,774 00
Due from Commonwealth, State aid	15,217 07
Due from Commonwealth for Corporation tax	37,356 26
Due from Commonwealth for National Bank tax	20,094 37
Surrendered estates, estimated value	132,268 20
Salable city lands, estimated value	79,851 75
Uncollected water bills	1,098 93
Uncollected taxes of 1880 and 1881	79,077 72
Miscellaneous bills, tuition of non-residents, sale of material, etc.	2,582 51
Total assets	$390,605 96

FUNDED CITY DEBT.

Bonds outstanding	$3,154,000 00
Sinking Fund	1,356,391 87
Balance, net city debt	$1,797,608 13

FUNDED WATER DEBT.

Bonds outstanding	$1,478,700 00
Sinking Fund	427,630 31
Balance, net water debt	$1,051,069 69

FUNDED DEBT COMPARED.

The net city and water debt, Nov. 30, 1881, as compared with the same debt, Nov. 30, 1880: —

	1881.	1880.
Gross funded debt	$4,632,700 00	$4,782,700 00
Less amount in both Sinking Funds	1,784,022 18	1,648,128 19
Net gross debt	$2,848,677 82	$3,134,571 81
Decrease of net gross debt, Nov. 30, 1881		$285,893 99

VALUE OF ESTATES.

Valuation made by the Assessors in 1881	$51,676,490 00
Valuation made by the Assessors in 1880	49,629,060 00
Increase	$2,047,430 00

The Assessors' warrant upon the Treasurer called for the collection of $766,489.11 for city purposes alone, of which $697,926.27 have been thus far (Nov. 30, 1881) collected. The various revenues of the city, other than from taxes, amounted at the same date to $275,840.45. These two items of income, aggregating $973,766.72, with $223,680.93, principally corporation and other taxes, have been our resources for the past year for the liquidation of the ordinary claims against the city, including $494,327.50 paid into the Sinking Funds, and for interest on the bonded debt. In 1883 and 1884, $1,348,000 of the bonded debt will mature, and will be paid from the Sinking Funds provided for that purpose. Then, and not till then, can we hope for much if any reduction from our present rate of taxation, — viz., $16 on a thousand; and the intervening years will demand prudent management and skilful care on the part of all who shall be intrusted with the control of the affairs of the city.

In regard to the five trust funds referred to in the list of Liabilities of the City, I renew my recommendation of last year, that they be established in the form of a tangible fund under the care of their respective commissioners.

ASSESSORS.

"Any system of valuation and assessment of property, for the purpose of raising revenue to defray general or local expenditures by means of taxation, which will insure equality of assessment, certainty and economy in collection, and comparative freedom from trouble and annoyance to the tax-payer, will in itself constitute

the perfection of taxation. On the other hand, when there is uncertainty, inequality, or injustice in the methods of assessment, the tax becomes a mere arbitrary exaction, repellent and destructive alike to capital, manufactures, and commerce." Such are the declarations of Hon. David A. Wells, one of the most able and competent authorities on that subject in our country; and his sound views may well form a basis of action by any city, State, or nation, in affixing taxes on its people.

This most important department of our government, owing to the harmonious action of its members and the watchful care of the Finance Committee, has shown a marked improvement during the year. An admirable system of record books is now in use, fully accessible to every citizen, and easily understood, in which all the transactions of the Board are properly recorded. Perhaps the most important change that has been adopted has been the new system of making abatements on taxes, which now requires the united action of the full Board, with the concurrent advice of the Assistant Assessors on all questions. The system of communication between the office of the Assessors and those of the Treasurer and Auditor, together with the monthly examination by the Finance Committee of their mutual transactions, has been found to work very acceptably.

The work in the office has so much increased of late that I would recommend the appointment of a competent business man to act as secretary, who, thoroughly understanding its workings, may be constantly on duty at the office to answer any calls for information on the part of citizens upon any point, and to assist the Assess-

ors in their responsible duties. By the united action and the improved methods of the Board, as just indicated, I am glad to say that we are tending toward a more just and equal valuation of property in all portions of our widely extended city, and that the proper rights of all our citizens in this regard are thereby the better insured, and a greater degree of confidence and satisfaction felt among our people.

WATER WORKS.

From the seventeenth annual report of the Water Board, you will ascertain that the total cost of our system of water supply has reached the sum of $1,728,655.35. The receipts from rates during the past year have been $174,608.01, while the total expenditures have been $171,027.38, leaving a balance showing gain of $3,580.63. Of the amount expended, $91,585 were for interest on the water debt, and $45,855 were paid to the Sinking Fund. The average daily consumption of water has been 2,472,108 gallons. The water of Fresh Pond reached its lowest level on Feb. 9th and 10th, having been 1.27 feet below the top of the conduit, and it was therefore found necessary to use the centrifugal pump on the banks of the pond to raise the water up into the conduit; for six days the pump was thus used, and it was found an indispensable requisite for just that emergency. The highest level was reached on April 18th, when the water rose to 7.04 feet above the conduit. The water would have reached a higher point had it not become necessary to shut off the supply from Wellington Brook, owing

to the drainage into it of foul matter from the muck-heap of Niles Brothers' slaughter-house, which had mingled with the water flowing into the brook, which is a direct feeder of the pond. On Feb. 25th the Messrs. Niles were ordered by the Board of Health to cease depositing refuse from the slaughter-house on those muck-heaps; and they obeyed the order. The offensive establishment still exists in the same place, by the allowance originally of our neighboring town of Belmont; and as the purity of our water supply is so important, some steps should be taken to remove it.

The rainfall was 9.54 inches more in 1881 than in 1880, although this is about 7 inches below the average. As we are dependent upon the rainfall of so comparatively small an area for our supply, it would seem that we should look for some larger and more certain quantity for the future; therefore I would urge renewed efforts before the incoming Legislature for power to take an additional supply from the Shawsheen River.

The Board has made contracts for the necessary pump and pipes for a high-service supply to the residents along Washington Avenue and Arlington Street, on Cambridge Heights, and the work will be carried on in the spring to completion. This must be gratifying to the residents on that elevated and delightful locality.

HON. J. WARREN MERRILL.

It seems not improper that some notice should be taken of the retirement from the city's service, as a member of the Water Board, of the former mayor, under whose administration our water system became the

property of the city, and whose long and valuable services, both as president and member, we all appreciate. I allude to the Hon. J. Warren Merrill. We sincerely hope that his interest in this important branch of our government may continue, and that we may enjoy the benefit of his counsel and experience for many years to come.

SCHOOLS.

Our school system is still our peculiar pride, for I believe that no better schools exist than those of Cambridge. Among other profitable branches of study pursued in our public schools, the exercise of sentence-writing has especially attracted my attention, as it evinces a practical preparation for active business pursuits, so important in after life.

The various classes in the grammar schools compose readily sentences consisting not only of simple words and phrases, but also of words of like pronunciation but of different spelling; letters, using honorary and professional titles and abbreviations; commercial forms, such as receipts, promissory-notes, etc.; and short essays upon historical and biographical subjects. The penmanship, too, with which these compositions were executed is deserving of special mention.

The following items of information have been kindly furnished to me by Mr. Francis Cogswell, the able Superintendent of Schools: —

Number of pupils, December, 1881	8,169
Increase during the year	403
Number of teachers, including teacher of music	192
Increase during the year	10

Cost of instruction	$132,501 10
Increase over last year	2,129 35
Cost of instruction for each pupil	17 82
Decrease from last year for each pupil	35
Total expenditures for all school purposes	167,703 45
Increase over last year	4,655 39
Receipts from Hopkins Fund	770 07
Receipts from tuition of non-resident pupils	166 00

During the year a school-house has been built in Ward Three, at a cost of about $7,500; and new furniture for the same has been bought, to the amount of nearly $600. Fire escapes have been provided for three school buildings, at a cost of between $500 and $600.

Estimates have been received and a contract made for a new school-house, to be built the coming year on land owned by the city in Ward Four. The building, with the necessary grading and fence, will cost about $11,000.

Additional school accommodations in the vicinity of Lake View Avenue have been called for by citizens of Ward One. At no distant day a new school-house in that locality will be required.

I would suggest that it would be desirable to place the janitors of the several school buildings under the immediate direction of the School Committee, who have so much better opportunities for guarding against a waste of fuel and neglect to keep the buildings properly clean, and in every way promoting the better sanitary condition of the school-houses, than the Committee on Public Property.

THE PUBLIC LIBRARY.

From the twenty-fourth annual report of the Trustees, and the third under the title of the Cambridge Public Library, you will be informed of the careful and con-

scientious work upon this extension of the educational system of our city by the Trustees and the Librarian. There are few libraries in which the collection of historical works is more voluminous.

The reference department has received a liberal accession of books during this year, and the Librarian reports that it is much and acceptably used, especially by Biblical students. In the department of art, too, large additions have been made, especially in the lines of mechanical engineering, architecture, music, painting, and sculpture. The line of fiction has received the usual care and discrimination in the selection of books, and the policy alluded to in the Trustees' report of last year has been adhered to as a settled one.

I would ask that a careful perusal of the report be made by every member of the Council, as I think that there is hardly a proper appreciation existing of the great benefits of such an institution. Other and larger rooms are needed, and a new and special building that should be an ornament to the city would be very desirable. May we not hope that some of our wealthy and liberal townspeople may follow the good example of some people in other cities, and give a sum sufficient to erect a building for such a purpose, which shall be no discredit to a city with the literary pretensions of Cambridge? I append the following interesting statistics:

Whole number of books	13,770
Number issued for the year	82,850
Largest issue in any (the first) quarter	23,903
Largest monthly issue (in March)	9,268
Largest issue for one day (on March 5th)	657
Daily average	272
Number given, by fifteen persons	61

The Reading-Room grows in favor more and more, and is much used by those who may not be able to obtain like reading elsewhere. The amount of appropriation was $6,300, and the amount used was $6,299.50. The Trustees ask for only $200 this year in addition to the amount of last year's appropriation, and I trust you will give it to them.

HARVARD UNIVERSITY.

In bringing to your attention our educational interests, the list would be incomplete without a reference to the ancient and celebrated University located in our city. Founded only six years after the settlement of "the old town of Newtowne," that name was changed to "Cambridge" in memory of the English Cambridge, where several of the Puritan magistrates and elders had been educated, and it has been through its whole course a college town. The University has grown with its growth and strengthened with its strength. There are some who look upon the fair lands of Harvard with an eye to their taxable value, but the great mass of our citizens fully realize and appreciate the advantages we enjoy from its location among us. By reason of it the name and fame of our beloved city are extended almost world-wide, a higher standard of education necessarily prevails in our schools, and the whole tone of society is influenced and raised by the large number of people gathered within our borders in connection with the University, or from congenial associations. There is probably no like instance in our country or the world where the relations sustained between government and

university are so harmonious. In return for municipal care and protection, she grants our citizens the use of a library of 192,000 volumes, free lectures on the arts, sciences, and literature in her Sanders Theatre, and the use of her magnificent halls for civic purposes. We are indebted to her for kindly courtesies to distinguished guests; notably of late, when our French national visitors, the descendants of Lafayette, Rochambeau, DeGrasse, and others, our Revolutionary allies, under the escort of the representatives of the city government, were received by the President, Faculty, and students in a most becoming manner. I should also recognize the interest of its officers in our municipal affairs. In our seasons of joy or of sorrow, the President, with a courtesy which I here desire to acknowledge, has ever responded to our call. Our Board of School Committee was long graced by the active service and the ever-welcome presence of good Dr. Peabody, and on our Water Board the scientific corps is represented by the intelligent counsels of Prof. Eustis.

I would bespeak the continuance of the same cordial relations between the corporation of the University and the city as now exist.

STREETS.

The streets of the city are generally in a good condition, considering the comparatively small appropriation that was made last year, which was $62,011.89; but in view of the new streets which have been accepted and will have to be graded the coming season, and of

extensive repairs on the old streets, the amount asked for by the Superintendent for this year will be $100,000. Whether so much will actually be needed will be for the committees on Roads and Bridges and Finance to determine.

Personally, I am not fully satisfied with the patch-work policy which has of necessity prevailed for the past few years. Some portion of our principal thoroughfares should be well paved or substantially macadamized every year, and generally our streets and sidewalks must be kept in a perfectly safe condition. Many are only too ready to take advantage of the present unjust laws relating to the liabilities of cities and towns in cases of accidents. The very aged, the infirm, the careless, and in some instances intoxicated persons lay claims for damages alleged to have been received (many of which, upon investigation, are found to be of the most trivial character), who expect the city to guide them at every point, and if an accident takes place by their own heedlessness, to compensate them.

The following-named streets have been accepted during the year 1881, and are now public ways: —

Name.	From	To	Length.	Width.
Greenough Ave.	Highland Ave.	Ellsworth Ave.	$306\frac{34}{100}$ ft.	40 ft.
Summer St.	Inman St.	Amory St.	$249\frac{8}{100}$	30
Lambert Ave.	North Ave.	Mt. Pleasant St.	$1{,}537\frac{60}{100}$	50
Jay St.	River St.	Western Ave.	$402\frac{42}{100}$	40

The most important of the above is Lambert Avenue, which has been extended to Mount Pleasant Street, thus opening up a territory long in need of an outlet in the direction of Porter's Station. I desire to call your

attention to the condition of Prison Point Street, which my predecessor, Mayor Allen, in 1877 recommended to be paved. Five years of further use has rendered it now *dangerous* for public travel, and it is imperative on the government to do this work at an early day.

BRIDGES.

The bridges maintained by the city are in a good condition, with the exception of Brookline Bridge, to which reference was made last year. This bridge should be rebuilt above the piling early the ensuing season. The draw of the Third Street Bridge across Broad Canal should be widened so as to allow a larger class of vessels to pass and repass, and this is asked for by many business men on and near the canal.

West Boston, Canal or Craigie's, and Prison Point Bridges, under the excellent supervision of Hon. Ezra Parmenter and Hon. F. W. Lincoln, Bridge Commissioners, continue to be maintained in a most satisfactory and admirable manner. The long experience of these commissioners has enabled them to meet every public want in the care of these greatly frequented and important thoroughfares.

CHARLES RIVER EMBANKMENT.

I next call your attention to the proposed improvement on the Cambridge side of the Charles River. The Legislature of 1881 incorporated a company which has since been duly organized for this purpose, and which I believe possesses sufficient capital and energy to carry out the project to a successful and early completion.

A substantial and solid sea-wall is to be built, from a point on the West Boston Bridge near the old toll-house to the Brookline Bridge, a distance of nearly two miles, and all the intervening space to *terra firma* is to be filled in and graded. On the immediate bank of the river a broad promenade, one hundred or more feet in width, is to be laid out by the new corporation, which, when finished, will be given to the city under proper and reasonable conditions; the remainder of the land is to be laid out in building lots and broad avenues, connecting, when possible, with our present system of streets in that district. With like improvements on the Boston side of the bay, with the water space dredged sufficiently for a constant depth of water over the remaining flats, no offensive nuisance, now so much complained of at times, can exist. Such improvements can but attract the attention of residents of other places to our city as one of very desirable advantages, thereby adding to our prospective amount of taxable property.

Of course there is little that our City Council can do to further the interests of such an enterprise, and to hasten the conclusion of a "consummation so devoutly to be wished" as an adjunct to our material prosperity; but I feel sure that I express but the sentiment of the city when I pledge to the corporation having this work in hand the hearty support and co-operation of this municipality.

THE NEW BRIDGE.

This subject naturally leads me to allude to the proposed new bridge across the Charles. That such a new avenue will be needed in the near future there can be

no doubt. For your information, a detail from the police force has made a count of the number of foot passengers, horse-cars, and other vehicles crossing West Boston and Craigie's Bridges both ways on a recent fair day, between six o'clock A. M. and six o'clock P. M.; and the result is as follows: —

	West Boston Bridge.	Craigie's Bridge.
Foot passengers	2,504	4,732
Horse-cars	866	482
Other vehicles	2,290	3,952

In response to a petition from a large number of prominent citizens, the City Council of 1881 authorized and directed the Mayor to ask the General Court for leave to build a bridge across the Charles River in connection with the city of Boston. A petition to that effect has been prepared, public notice has been given in the newspapers authorized by the Secretary of State, and it has also been duly served on the city of Boston.

There are now several different propositions made relative to this matter; and the one that demands a bridge of a much more permanent and expensive character than any now existing across our river, and that it should be built by the counties of Middlesex and Suffolk, seems reasonable, I must admit. Such a bridge, if running, as is proposed, from the end of Front Street extended (which is virtually Main Street extended), — that is to say, running from the new embankment wall, about two thousand feet in length, across the channel, — would strike the Boston side on a line with the present extension of West Chester Park, and would thus open up a direct avenue of travel from all the towns on the north and east of Cambridge to the South End of Boston,

including Dorchester, Neponset, and the Highland District, the new park system of Boston, and all the towns lying southerly, such as Milton, Hyde Park, etc.

STREET LAMPS.

In the nearly one hundred miles of streets in Cambridge we have eight hundred and forty-seven lamps, of which seven hundred and seventy-seven are burners of gas, sixty-one of kerosene, and nine of naphtha. The amount appropriated was $20,500; amount actually spent, $19,309.52. The increase of lamps has been nine, and they were put up at the expense of the petitioners. The lamps have been burned two hundred and seventy-nine nights, at an average cost of $5\frac{1}{2}$ cents for the gas and $1\frac{1}{2}$ cents for the kerosene. Respecting the complaints that have been made so long as to the want of lights when the moon is hidden by clouds, the inconvenience inheres in the original system, adopted in this department as long ago as 1856, of lighting the lamps according to the change of the moon; and the remedy seems to be to adopt the Boston system, which is that the lamps are lighted without regard to the state of the moon, or the liability of its light being obscured by the changes of weather. The Superintendent proposes two plans to meet this difficulty, which he estimates will cost respectively $29,156.80 and $27,210.91, while the present system requires an appropriation of $20,000. It is for you to consider this matter, and adopt that plan which, under all the circumstances, shall commend itself best to your judgment.

SEWERS.

The system of sewerage has been considerably extended, — a large demand having been made; and this has been complied with by the building of twenty-five sewers, varying in length from thirty-eight feet to fifteen hundred and fifty-one feet, all at a cost of $10,545.30.

A large amount of sewage matter has been dredged from the outlet of the Bridge Street sewer, and taken to the dumping ground at Hangman's Island, in Boston Harbor. This deposit is delivered in such large quantities under the bridge and adjacent wharves that frequent removals of it will be necessary. Five ninths of the expense, however, will, under statute provision, be borne by the city of Somerville.

Much complaint has been justly made of the drainage in the vicinity of First, Otis, and Thorndike Streets. The existing sewers are in a bad condition, being broken and settled in many places. The whole system in that neighborhood will have to be thoroughly rebuilt, and it must be attended to at the earliest practicable day in the spring.

The commission appointed by the governor of the State to consider the matter of drainage for the Mystic and Charles River valleys is expected to report at the coming session of the Legislature. Their propositions, if considered feasible and they become adopted, will materially affect this city. The construction of a sewer to the deep waters of the sea for the use of the towns draining into these valleys will fall more onerously upon us than them, as our valuation is the greatest; yet the

advantages to be derived are incalculable for the health of our city, — more particularly in the future, when our expected increase of population will find our present sewerage system entirely inadequate. I believe that our most competent engineer fully understands this whole matter, and that he is planning all present work with a view to a future connection with the grand system of sewerage which may be adopted according to the proposition indicated.

POLICE DEPARTMENT.

From the fourth annual report of the present Chief of Police you will learn the exact state of this force and its work for the year. The number of men in this department is fifty-seven, divided into three reliefs, and the amount of expense has been $53,025.83. The Chief suggests an increase in the number of patrolmen, and the return to the Boston system of reliefs, two by night and one by day; and his suggestions are worthy of careful consideration. The mounted policemen have been found to be of great service during the months of July, August, and September, in protecting the property of absentees. The protection to gardens and orchards was found to be augmented by this means very satisfactorily, owing to the rapidity with which officers could move from one locality to another. Mr. Charles B. Jones, a remarkably efficient detective, died in March last, and in his death the department lost one of the best officers ever connected with it. My intimate relation with the police force enables me to say that the safety of our citizens and the protection of their prop-

erty were never better insured than to-day. The entire body is united and harmonious, the officers maintain the best of discipline, and the men are obedient to the regulations. It shall be my aim to hold them to this high standard.

LICENSES.

The whole number of licenses granted for the sale of intoxicating liquors was one hundred and fifty-five, as follows: —

Innholders	6
Victuallers	65
Grocers	51
Apothecaries	27
Wholesale dealers	2
Bottlers	4
Total	155

In view of the recent expression of our citizens by ballot as to the sale of inioxicating liquors, the vote being so nearly equally divided, I trust that your action will be such that the good gained in the past five years may not be lost by any extreme course in either direction.

FIRE DEPARTMENT.

Chief Casey's third annual report shows the operations of the Fire Department in a clear manner. The force consists of 97 men in all branches, of which 22 are permanently employed, and the remainder are *call* men. The appropriation was $55,721.90, all of which was used. The apparatus is generally in a good condition, though Chief Casey reports that the relief engine is old and unreliable, and recommends the disposition of it and

another old engine, and the purchase of a new one to take the place of No. 1, which, being the oldest, would answer the purpose of a relief. Twenty-two horses are employed to do the work of the department. The fire-alarm telegraph proves its value; its wires have been extended through Potter Street from Third to Ninth, thus dispensing with the cable used in crossing the canal, which was frequently broken by vessels in passing through the draw. Two new alarm boxes have been put up: one on Lake View Avenue, numbered 87; and the other, numbered 125, on the large manufactory of Messrs. F. A. Kennedy & Co., on Green Street, and at their expense. I would refer you to the report of the Chief Engineer for more particulars of this department, which has performed its service so well.

ALMSHOUSE AND OVERSEERS OF THE POOR.

The same general system pursued during the past five years, with such changes as have become necessary, has been continued with encouraging results, in favor of a wise distribution of relief to the deserving poor and a corresponding benefit to the city treasury.

The number of paupers supported by the city at various institutions during the past year has been as follows: —

At Almshouse	250
At State Workhouse	1
At State Reform School	7
At State Industrial School	1
At State Primary School	1
At State Lunatic Hospitals	43
At Middlesex House of Correction	7
Total	310

The appropriation with estimated revenue made by the City Council for the Pauper Department, the Almshouse, and for the collection of house offal, for the financial year ending Nov. 30, 1881, was . $41,000 00
There have been expended 40,549 07
The receipts have been 14,716 21

Leaving a total cost to the city of. . . . $25,832 86

The cost of outside aid during the month of December for the years below indicated has been as follows, viz.:—

1876	$3,223 46
1877	403 18
1878	333 45
1879	490 77
1880	418 98
1881	358 77

showing the advantage of the new system during the past five years in fixing the settlement of every applicant for aid.

From personal inspection I can report the Almshouse to be in excellent condition, as usual.

THE CAMBRIDGE CEMETERY.

The Commissioners continue to exercise their trust in the oversight of this final resting-place of our dead with watchful care. No effort has been spared which would tend to promote its attractiveness, and make it more worthy of the reputation of our city. Various improvements have been made during the year, and others are still in contemplation for the future development and adornment of the grounds. The whole number of

interments made in the Cemetery since its establishment in 1854 has been 11,936, and the number during the past year has been 537.

THE BELMONT DISTRICT.

Our residents in this recently acquired portion of Ward One seem to be well satisfied with their present situation.

All the advantages of the city generally have been spread over this district, and I think that the people already feel the increased benefits enjoyed, and duly appreciate them. It would seem to be no more than an act of justice, and certainly of ordinary courtesy, that that district should be accorded, at least for the present, a representative in the Common Council.

THE DEPARTMENT REPORTS.

Of course I have only been able to allude to the main points presented by the full and lucid reports of the several departments; but I would certainly enjoin upon you to read carefully all these reports, and make yourselves familiar with their contents in detail. They are all interesting, and prepared with unusual care and completeness; and the heads of departments all deserve much credit in this regard.

In conclusion, gentlemen of the City Council, I have presented to you such an abstract of the transactions of the last government, and such suggestions as to the special work before you this year, as the time will allow. Perhaps the most concise advice that I could give you would be, to follow in the footsteps of your five imme-

diate predecessors, and continue their policy. Every municipal interest is prospering, and let it prosper.

As the Saxon of old opened his door on the stroke of twelve, at midnight of the last day of the year, to dismiss the past and welcome the present, and, as he said, to let out any evil influence and admit the good, so let us, on this threshold of our municipal year, open wide the doors of our council chambers, that the mistakes of the past may depart not to return, and that the spirit of thrift, economy, and justice may enter and control our acts in the future. With this lesson of the Saxon uppermost in mind, can we not all then heartily respond to his sentiment, —

"God speed the old year,
God bless the new"?

REPORT

OF THE

COMMITTEE ON FINANCE.

In undertaking the management of this important department of city affairs, your committee was aware at the outset of the disadvantages under which it was to labor as to its opportunities, as compared with those of the three years preceding. With no extraordinary resources upon which to depend for an increase of revenue, and with a present demand for additional expenditure in nearly every department, it was soon realized to be no easy task so to adjust the appropriations for the year as to avoid an increase of the rate of taxation. It is a gratifying fact to record that, notwithstanding the difficulties which seemed to be in the way, the economical policy hitherto in vogue has been continued during the year 1881.

A comparison of the appropriation accounts for the years given below shows that the expenditures under the different heads were: —

In 1880	$1,163,162 38
In 1881	1,143,594 53
Decrease in 1881	$19,567 85

Included in the payments for the past year were the following amounts, which were for what may be regarded as additions to the city property, viz.: —

Amount paid for Mill Pond property	$10,000 00
School-house in Ward Three	7,569 48
Fire escapes	563 84
	$18,133 32

The amount borrowed on temporary loans was: —

In 1881	$575,000
In 1880	350,000
Increase in 1881	$225,000

Of the total sum thus borrowed during the past financia year, the sum of $116,000 was advanced to the Commissioners on the Sinking Funds, as a part of the amount due that board Nov. 30, the same being included in the tax levy. This advance payment was principally to cover the city bonds maturing July 1. For the sum so advanced, interest was paid to the city by the commissioners, amounting to $1,301.16, in accordance with the provisions of the city ordinance. Although there appears to have been an increase of $109,000 in the amount borrowed for city purposes, on temporary loan, over the total borrowed in 1880, this fact has no special significance in relation to the total expenditures, except as regards the item of interest, which is given below.

The amount of interest paid on these temporary loans was, in 1881	$9,933 48
Less amount received from Commissioners on the Sinking Funds	1,301 16
Net interest on temporary loans	$8,632 32
Interest so paid in 1880	6,660 94
Increase in 1881	$1,971 38

Owing to causes not within the control of this year's City Council, the cash balance in the treasury at the end of the financial year of 1881 is greatly reduced from the amount on hand at the close of 1880.

The balance per Auditor's account was: —

In 1880	$29,139 60
In 1881	3,285 15
Decrease of 1881	$25,854 45

By a reference to the valuation tables in another part of this report, it will be seen that an addition of fifty cents to the rate of taxation would have maintained the balance in the treasury at the end of 1881 at nearly the sum reported as on hand Nov. 30, 1880. Your committee is of the belief that the figures, although showing a somewhat depleted treasury, will give a greater degree of satisfaction to our citizens than would have resulted from a large balance on an increased rate of taxation.

The committee met at the Treasurer's office, Nov. 30, immediately after the close of business. The cash on hand was examined, and found to agree with the amount appearing as the balance in his cash-book; namely, $3,285.15. This is in exact agreement with the balance, as shown on the books of the Auditor, every bill approved and therein entered having been paid.

The committee also met early in December, and carefully compared the Treasurer's books with those of the Auditor, and with the warrants of the Assessors. The several accounts were verified in these comparisons. A reference to the City Document for 1879, pages 26 and 27, will show the manner in which the examinations are made.

The usual tables from the Assessors' books are given below.

Polls and Valuation of Estates in 1881.

Wards.	Polls.	Personal.	Real Estate.	Total.	Dwellings.
Ward 1 . .	2,363	$5,077,950	$10,037,200	$15,115,150	1,604
" 2 . .	3,849	3,456,555	9,995,700	13,452,255	2,288
" 3 . .	2,809	1,382,785	6,563,600	7,946,385	1,375
" 4 . .	3,352	1,495,300	7,430,300	8,925,600	2,130
" 5 . .	1,458	1,139,600	5,097,500	6,237,100	1,040
Total,	13,831	$12,552,190	$39,124,300	$51,676,490	8,437

Polls and Valuation of Estates in 1880.

Wards.	Polls.	Personal.	Real Estate.	Total.	Dwellings.
Ward 1 . .	1,979	$4,519,750	$10,197,600	$14,717,350	1,414
" 2 . .	3,510	3,292,220	9,752,300	13,044,520	2,262
" 3 . .	2,561	1,354,690	5,722,400	7,077,090	1,366
" 4 . .	3,203	1,461,300	7,227,000	8,688,300	2,098
" 5 . .	1,226	961,200	4,598,100	5,559,300	917
Annexed Territory,	165	110,500	432,000	542,500	108
Total,	12,644	$11,699,660	$37,929,400	$49,629,060	8,165

By the foregoing tables, an increase is shown in all the wards of the city, as follows: —

	Polls.	Valuation.	Dwellings.
1881 . . .	13,831	$51,676,490	8,437
1880 . . .	12,644	49,629,060	8,165
Increase . .	1,187	$2,047,430	272

The amount assessed upon these valuations and upon polls was, —

In 1881	$850,730 61
1880	826,079 23
Increase	$24,651 38

The sum raised by taxation in 1881 is $18,629.39 less than was assessed in the year 1879, on a valuation of nearly $2,000,000 less than is shown by this year's tables.

The rate of taxation in 1881 was the same as in 1880, — $16 per $1,000, — with the usual discount of four per cent upon taxes paid on or before Oct. 10.

The work of your committee has been brought to a close. It undertook the duty of so guiding the financial legislation of

the year as to maintain as far as possible the good character established for our city by its administrations for the preceding four years.

By the exercise of its watchful care the City Council has made the undertaking a successful one, and the expenditure of the public money has been held within the bounds of proper economy.

JAMES A. FOX,
NATHAN G. GOOCH,
G. W. GOODNOW,
CHARLES WALKER,
JOHN READ,
GEO. C. BENT,
WILLIAM A. HAYES, JR.,
GEO. H. HOWARD,
GEO. A. ALLISON,

Committee on Finance.

ANNUAL REPORT

OF

THE AUDITOR OF ACCOUNTS.

Gentlemen of the City Council: —

The undersigned, in compliance with a city ordinance, herewith presents the Thirty-fifth Annual Report of the receipts and expenditures of the City of Cambridge, being for the year ending Nov. 30, 1881.

Total receipts for the year	$1,923,509 17
Add the amount in treasury Dec. 1, 1880 .	29,742 47
	$1,953,251 64
Total expenditures for the year	1,949,966 49
* Balance in treasury Nov. 30, 1881 . . .	$3,285 15

There has been no increase in the permanent debt of the city during the year.

Of this debt there have matured during the year, viz. : —

City Loan bonds	$100,000 00
Water Loan bonds	50,000 00

which bonds have been presented and paid, except $3,000 of the City Loan.

The following is a statement of the temporary loans negotiated during the year, and the rate of interest paid on the same : —

---

* Deducting from the above $3,000 held for the payment of unpresented bonds, the actual balance is $285.15. (Since the 1st of December these bonds have been paid.)

Jan. 3, 1881	$75,000	Int. 4 per cent,	due	Oct. 10, 1881.
" 10, "	60,000	" $3\frac{3}{4}$	"	"
Feb. 9, "	55,000	" $3\frac{1}{2}$	"	"
March 9, "	40,000	" $4\frac{1}{8}$	"	"
" 31, "	30,000	" $3\frac{7}{8}$	"	"
April 11, "	5,000	" $3\frac{7}{8}$	"	"
" 11, "	25,000	" $3\frac{7}{8}$	"	"
May 10, "	20,000	" $3\frac{5}{8}$	"	"
June 10, "	25,000	" 3	"	"
" 30, "	50,000	" $2\frac{7}{8}$	"	"
" " "	50,000	" $2\frac{7}{8}$	"	"
" " "	50,000	" $2\frac{7}{8}$	"	Oct. 11, 1881.
" " "	50,000	" $2\frac{7}{8}$	"	" 12, "
" " "	40,000	" $2\frac{7}{8}$	"	" 13, "
	$575,000			

THE CITY DEBT.

	1881.	1880.
Funded loan	$3,154,000 00	$3,254,000 00
Funded water loan	1,478,700 00	1,528,700 00
Trust funds	26,000 00	26,000 00
State and county taxes	78,363 53	78,363 53
	$4,737,063 53	$4,887,063 53

The means for paying the funded debt have been increased during the year as follows: —

Amount of both sinking funds Nov. 30, 1880		$1,648,128 19
Less amounts paid into the treasury for the redemption of matured bonds		150,000 00
		$1,498,128 19
Amount appropriated by City Council in 1881	$210,720 00	
Interest accumulations during year	75,173 99	
		285,893 99
Amount of both funds Nov. 30, 1881		$1,784,022 18

The net city and water (funded) debt Nov. 30, 1881, compared with the same debt Nov. 30, 1880, is as follows: —

	1881.	1880.
Gross debt	$4,737,063 53	$4,887,063 53
Less amount in both sinking funds and cash in treasury,	1,784,307 33	1,677,870 66
	$2,952,756 20	$3,209,192 87
Decrease of net debt Nov. 30, 1881	$256,436 67	

THE FUNDED DEBT.

Following is a statement of the total funded debt of the city, with the dates of maturity and rate of interest thereon: —

Bridge Loan.

Due July 1, 1884, interest 6 per cent . .	$94,000	
July 1, 1885, " 6 " . .	26,000	
		$120,000

Building Loan.

Due July 1, 1883, interest 6 per cent . .	$119,000	
April 1, 1884, " 6 " . .	198,000	
July 1, 1885, " 6 " . .	17,000	
		334,000

City Loan.

Due Aug. 1, 1882, interest 5 per cent . .	$30,000	
Sept. 10, 1882, " 5 " . .	40,000	
Nov. 20, 1882, " 5 " . .	14,000	
July 1, 1886, " 6 " . .	100,000	
April 1, 1889, " 5 " . .	100,000	
July 1, 1890, " 6 " . .	20,000	
Jan. 1, 1893, " 5 " (gold)	150,000	
		454,000

Funding Loan.

Due April 1, 1883, interest 6 per cent . .	$216,000	
July 1, 1884, " 6 " . . .	100,000	
July 1, 1885, " 6 " . . .	24,000	
		340,000
Amount carried forward		$1,248,000

Amount brought forward		$1,248,000
Land Loan.		
Due July 1, 1893, interest 6 per cent . .	$10,000	
		10,000
Low-Land Loan.		
Due July 1, 1882, interest 6 per cent . .	$15,000	
July 1, 1883, " 6 " . .	270,000	
April 1, 1884, " 6 " . .	240,000	
Oct. 1, 1884, " 6 " . .	56,000	
July 1, 1885, " 6 " . .	122,000	
July 1, 1886, " 6 " . .	60,000	
Oct. 1, 1887, " 5 " . .	120,000	
		883,000
Paving Loan.		
Due July 1, 1893, interest 6 per cent . .	$100,000	
July 1, 1894, " 6 " . .	130,000	
July 1, 1895, " 6 " . .	25,000	
		255,000
Sewer Loan.		
Due Oct. 1, 1895, interest 6 per cent . .	$20,000	
July 1, 1896, " 6 " . .	29,000	
July 1, 1903, " 6 " . .	136,000	
July 1, 1904, " 6 " . .	295,000	
July 1, 1905, " 6 " . .	144,000	
		624,000
Street Loan.		
Due July 1, 1893, interest 6 per cent . .	$13,000	
		13,000
Street-Widening Loan.		
Due July 1, 1886, interest 6 per cent . .	$7,000	
July 1, 1903, " 6 " . .	10,000	
July 1, 1904, " 6 " . .	90,000	
July 1, 1905, " 6 " . .	14,000	
		121,000
Total of the sundry city loans		$3,154,000
Water Loan.		
Due May 1, 1875, interest 6 per cent . .	$200	
Aug. 1, 1883, " 6 " . .	55,000	
Amounts carried forward	$55,200	$3,154,000

Amounts brought forward	$55,200	$3,154,000
Due July 2, 1886, interest 6 per cent . .	100,000	
April 1, 1887, " 6 " . .	150,000	
April 1, 1888, " 6 " . .	175,000	
May 1, 1889, " 6 " . .	112,000	
July 1, 1890, " 6 " . .	60,000	
May 1, 1891, " 6 " . .	50,000	
July 1, 1892, " 6 " . .	335,000	
April 1, 1894, " 6 " . .	150,000	
April 1, 1895, " 6 " . .	160,000	
July 1, 1896, " 6 " . .	103,000	
July 1, 1897, " 6 " . .	16,000	
July 1, 1898, " 5 " . .	12,500	
		1,478,700
Total funded debt		$4,632,700

Dates of Maturity — Funded Loan.

Following is a statement of the total funded debt, showing the amount of bonds due and payable each year until all mature: —

1875	$200
1882	99,000
1883	660,000
1884	688,000
1885	189,000
1886	267,000
1887	270,000
1888	175,000
1889	212,000
1890	80,000
1891	50,000
1892	335,000
1893	273,000
1894	280,000
1895	205,000
1896	132,000
1897	12,500
Amount carried forward	$3,927,200

Amount brought forward	$3,927,200
1898	16,000
1903	146,000
1904	385,000
1905	158,000
	$4,632,700

LIABILITIES AND ASSETS.

Liabilities.

Funded city loan	$3,154,000 00
Funded water loan	1,478,700 00
State tax	52,155 00
County tax	26,208 53
National bank tax	5,714 52
Trust funds	26,000 00
Amount due State for liquor licenses	4,918 75
	$4,747,696 80

Assets.

Cash in treasury	$285 15
Amount in sinking funds	1,356,391 87
Amount in sinking fund of water works	427,630 31
Notes receivable secured by mortgage	19,774 00
City lands available for market	89,083 00
Uncollected taxes of 1880 and 1881	79,077 72
State aid due from Commonwealth	15,217 07
Corporation tax due from Commonwealth	37,356 26
National bank tax due from Commonwealth	20,094 37
Uncollected water bills	1,098 93
Uncollected miscellaneous bills	2,162 23
Surrendered estates sale account	132,268 20
	$2,180,439 11
* Excess of liabilities over assets	$2,567,257 69

* The above assets do not, of course, include the public buildings of the city and other public property in use, not in the market for sale.

RECEIPTS.

The receipts of the year, as credited to the several city accounts, are as follows: —

No.		
1.	Bills Receivable	$2,411 00
2.	Bridges (West Boston, Craigie's, and Prison Point)	119 34
3.	Cambridge Public Library	2,325 49
4.	Cemeteries	14,166 38
5.	Cemetery Fund	850 00
6.	Fire Department	333 50
7.	Incidental Expenses	26,132 69
8.	Interest	4,689 31
9.	Lighting Streets	28 94
10.	Temporary Loan	575,000 00
11.	Pauper Department	5,949 26
12.	Pauper Department (Almshouse)	3,230 07
13.	Pauper Department (House Offal)	5,536 88
14.	Police Department	3,987 50
15.	School Department (Salaries)	936 07
16.	School Department (Text-Books and Stationery)	1 00
17.	Sewers (Construction)	3,788 11
18.	Sewers (Maintenance)	1,481 76
19.	Shade Trees and Public Grounds	6 00
20.	Sinking Funds, Commissioners of	100,000 00
21.	Sinking Fund of Water Works, Trustees of	50,000 00
22.	State Aid	15,151 47
23.	Street Department (Repairs)	674 63
24.	Street Department (Watering)	8,648 23
25.	Surrendered Estates	1,874 53
26.	Surrendered Estates (Care and Repair)	1,098 49
27.	Surrendered Estates (Sale Account)	4,610 00
28.	Tax, Corporation	40,594 93
29.	Tax, National Bank	21,190 89
30.	Taxes of 1878	42 00
31.	Taxes of 1879	1,746 22
32.	Taxes of 1880	62,605 07
33.	Taxes of 1881	782,167 77
34.	Tax Lien Account	6,450 84
35.	Water Works (Rates, Fines, etc.)	171,970 02
36.	Water Works (Supplies)	3,710 78
		$1,923,509 17

EXPENSES.

The expenditures of the year, as charged to the several city accounts, are as follows: —

No.		
1.	Abatements and Discounts	$44,766 89
2.	Bridges	2,519 16
3.	Bridges (West Boston, Craigie's, and Prison Point)	5,519 09
4.	Cambridge Public Library	6,299 50
5.	Cemeteries	11,587 69
6.	Engineering	5,935 41
7.	Fire Department	55,721 90
8.	Health Department	1,697 10
9.	Incidental Expenses	39,013 71
10.	Interest	202,339 98
11.	Interest on Water Loan	91,201 00
12.	Lighting Streets	19,338 15
13.	Loan (Temporary)	575,000 00
14.	Loan, City Bonds	97,000 00
15.	Loan, Water Bonds	50,000 00
16.	Pauper Department	17,331 43
17.	Pauper Department (Almshouse)	16,402 54
18.	Pauper Department (House Offal)	7,517 35
19.	Police Department	57,013 33
20.	Salaries	22,004 58
21.	School Department (Drawing Schools)	751 68
22.	School Department (Incidental Expenses)	1,318 83
23.	School Department (Salaries)	132,501 10
24.	School Department (Text-Books and Stationery)	3,107 45
25.	School-Houses (Care and Repair)	30,024 39
26.	Sewers (Construction)	9,489 67
27.	Sewers (Maintenance)	8,011 96
28.	Shade Trees and Public Grounds	1,993 47
29.	Sinking Funds	164,865 00
30.	Sinking Fund of Water Works	45,855 00
31.	State Aid	18,155 25
32.	Stationery and Printing	3,072 35
33.	Street Department (Paving)	6,444 51
34.	Street Department (Repairs)	62,011 89
35.	Street Department (Watering)	14,592 23
36.	Surrendered Estates (Care and Repair)	530 77
37.	Surrendered Estates (Sale Account)	85 00
38.	Tax, National Bank	5,796 91
	Amount carried forward	$1,836,816 27

	Amount brought forward	$1,836,816 27
39.	Tax, Corporation	48 61
40.	Tax, County	26,208 53
41.	Tax, State	52,155 00
42.	Tax Lien Account	77 91
43.	Water Works (Construction)	6,824 81
44.	Water Works (Maintenance)	23,833 89
45.	Water Works (Rates, Fines, etc.)	1,072 79
46.	Water Works (Supplies)	2,928 68
		$1,949,966 49

A statement in detail of the receipts and expenditures of each department, with its appropriations and the balance unexpended, is given on the following pages.

Respectfully submitted,

FRANKLIN PERRIN,
Auditor of Accounts.

CAMBRIDGE, MASS., Dec. 28, 1881.

List of Appropriations for the various City Departments, with the Receipts and Expenditures of the same, for the Year ending Nov. 30, 1881.

CITY ACCOUNTS.	Appropriations.	Estimated Revenue.	Actual Revenue.	Amount of Appropriation transferred to.	Amount of Appropriation transferred from.	State of Appropriation Nov. 30, 1881.	Expended.	Balance unexpended before Transfer.	Balance unexpended after Transfer.
Abatements and Discounts	$40,000 00	.....	.....	$4,766 89	.....	$44,766 89	$44,766 89	.....	.....
Bridges	2,500 00	.....	.....	19 16	.....	2,519 16	2,519 16	.....	.....
Bridges (West Boston, Craigie's, and Prison Point)	7,000 00	.....	$119 34	330 98	$1,811 89	5,519 09	5,519 09	$1,480 91	.....
Cambridge Public Library	4,000 00	$2,300 00	2,325 49	.....	.....	6,300 00	6,299 60	50	$0 50
Cemeteries	500 00	10,000 00	14,166 38	1,087 69	.....	11,587 69	11,587 69	.....	.....
Engineering	6,200 00	.....	.....	.....	264 59	5,935 41	5,935 41	264 59	.....
Fire Department	54,700 00	200 00	333 50	821 90	.....	55,721 90	55,721 90	.....	.....
Health Department	2,000 00	.....	.....	.....	299 90	1,700 10	1,697 10	302 90	3 00
Incidental Expenses	25,000 00	20,000 00	26,132 69	.....	7,820 37	39,179 63	39,013 71	3,371 54	165 92
Interest	199,000 00	3,000 00	4,689 31	339 98	.....	202,339 98	202,339 98	.....	.....
Interest on Water Loan	.....	*91,585 00	.....	.....	.....	91,585 00	91,201 00	384 00	384 00
Lighting Streets	20,500 00	.....	28 94	.....	1,161 76	19,338 24	19,338 15	1,161 85	09
Pauper Department	12,000 00	4,000 00	5,949 26	1,331 43	.....	17,331 43	17,331 43	.....	.....
Pauper Department (Almshouse)	13,000 00	3,000 00	3,230 07	402 54	.....	16,402 54	16,402 54	.....	.....
Pauper Department (House Offal)	4,500 00	4,500 00	5,536 88	.....	1,482 18	7,517 82	7,517 35	1,482 65	47
Police Department	55,500 00	2,000 00	3,987 50	.....	486 67	57,013 33	57,013 33	486 67	.....
Salaries	21,500 00	.....	.....	504 58	.....	22,004 58	22,004 58	.....	.....
School Department (Drawing Schools)	725 00	.....	.....	51 18	17 91	758 27	751 68	24 50	6 59
School Department (Incidentals)	1,650 00	.....	.....	.....	331 17	1,318 83	1,318 83	331 17	.....
School Department (Salaries)	133,600 00	1,300 00	936 07	.....	2,398 90	132,501 10	132,501 10	2,398 90	.....
School Department (Text-Books and Stationery)	3,700 00	.....	1 00	.....	581 25	3,118 75	3,107 45	581 25	11 30
School-Houses (Care and Repair)	29,000 00	.....	.....	1,075 57	51 18	30,024 39	30,024 39	.....	.....
Sewers (Construction)	4,100 00	400 00	3,788 11	5,000 00	.....	9,500 00	9,489 67	10 33	10 33
Sewers (Maintenance)	6,600 00	900 00	1,481 76	511 96	.....	8,011 96	8,011 96	.....	.....
Shade Trees and Public Grounds	3,000 00	.....	6 00	.....	1,006 35	1,993 65	1,993 47	1,006 53	18
Sinking Funds	164,865 00	.....	.....	.....	.....	164,865 00	164,865 00	.....	.....
Sinking Fund of Water Works	.....	*45,855 00	.....	.....	.....	45,855 00	45,855 00	.....	.....
State Aid	.....	14,750 00	15,151 47	3,405 25	.....	18,155 25	18,155 25	.....	.....
Stationery and Printing	3,000 00	.....	.....	72 35	.....	3,072 35	3,072 35	.....	.....
Street Department (Paving)	6,000 00	.....	.....	457 77	.....	6,457 77	6,444 51	13 26	13 26
Street Department (Repairs)	60,000 00	200 00	674 63	1,811 89	.....	62 011 89	62,011 89	.....	.....
Street Department (Watering)	9,000 00	9,000 00	8,648 23	.....	3,407 77	14,592 23	14,592 23	3,407 77	.....
Surrendered Estates	.....	600 00	1,874 53	.....	600 00	.....	.....	600 00	.....
Surrendered Estates (Care and Repair)	.....	800 00	1,098 49	.....	269 23	530 77	530 77	800 00	.....
Water Works (Construction)	20,000 00	.....	.....	.....	.....	20,000 00	6,824 81	13,175 19	13,175 19
Water Works (Maintenance)	.....	*30,000 00	.....	.....	.....	30 000 00	23,833 89	6,166 11	6,166 11
Water Works (Rates, Fines, etc.)	.....	*2,000 00	171,970 02	.....	.....	2,000 00	1,072 79	927 21	927 21
Water Works (Supplies)	.....	3,000 00	3,710 78	.....	.....	3,000 00	2,928 68	71 32	71 32
Totals	$913,140 00	$249,390 00	$275,840 45	$21,991 12	$21,991 12	$1,164,530 00	$1,143,594 53	$38,434 99	$20,935 47

* These four items, amounting to $169,440, make the Estimated Revenue of Water Works, Rates, Fines, etc.

DETAILED STATEMENT.

SHOWING RECEIPTS AND EXPENDITURES AND AMOUNTS APPROPRIATED UNDER EACH CITY ACCOUNT FOR THE FINANCIAL YEAR ENDING NOV. 30, 1881.

Abatements and Discounts.

Amount appropriated		$40,000 00
Add amount transferred to		4,766 89
		$44,766 89
EXPENDED.		
For Abatements of taxes	$14,737 44	
Discounts on taxes	30,029 45	
Total, as per item No. 1 of expenses		$44,766 89

Bills Receivable.

RECEIVED.

For amount on account of mortgage notes held by city for surrendered estates (sale account), as per item No. 1 of receipts	$2,411 00

Bridges.

Amount appropriated		$2,500 00
Add amount transferred to		19 16
		$2,519 16
EXPENDED.		
For Draw hoisting	$575 00	
Hardware and tools	7 00	
Iron work	26 61	
Labor, as per pay-roll	825 00	
Lumber	1,047 22	
Oil	1 31	
Repairs	37 02	
Total, as per item No. 2 of expenses		$2,519 16

Bridges (West Boston, Craigie's, and Prison Point).

Amount appropriated		$7,000 00
Deduct amount transferred from		1,811 89
		$5,188 11
Add amount transferred to		330 98
		$5,519 09

RECEIVED.

For One half bill of sheathing	$78 93	
Wharfage	40 41	
Total, as per item No. 2 of receipts	$119 34	

EXPENDED.

For Carting dirt	$19 00	
Examination of records	2 50	
Engineer, Civil, services	100 00	
Fuel	227 62	
Gas	893 54	
Hardware and tools	76 35	
Hose	15 00	
Iron work	103 55	
Labor, as per pay-roll	2,079 89	
Lumber	423 13	
Oil, matches, etc.	12 51	
Piping and repairs	69 39	
Repairs, general	477 42	
Salary of commissioner	500 00	
Sand	4 00	
Stationery	8 18	
Street lanterns	38 00	
Sweeping and cleaning	129 51	
Water rates	14 50	
Watering streets	325 00	
Total, as per item No. 3 of expenses		$5,519 09

Cambridge Public Library.

Amount appropriated	$4,000 00
Estimated revenue	2,300 00
	$6,300 00

RECEIVED.

For Catalogues and fines	$160 24	
Dog licenses from county	2,161 55	
Refunded	3 70	
Total, as per item No. 3 of receipts	$2,325 49	

EXPENDED.

For Advertising	$3 75	
Assistants, services of	2,345 02	
Binding books	515 41	
Books	1,654 67	
Directory	2 50	
Expressage	20 17	
Furniture and repairs	136 25	
Gas	302 27	
Insurance	105 00	
Ice	15 45	
Magazines and papers	176 19	
Postage	7 06	
Press (hand)	11 00	
Printing	156 43	
Rent	750 00	
Repairs	42 03	
Stationery	54 30	
Watering streets	2 00	
Total, as per item No. 4 of expenses		6,299 50
Balance unexpended		$0 50

Cemeteries.

Amount appropriated	$500 00
Estimated revenue	10,000 00
Add amount transferred to	1,087 69
	$11,587 69

RECEIVED.

For Sale and care of lots	$12,272 38	
Burial fees	1,727 50	
Interest on Cemetery Fund	166 50	
Total, as per item No. 4 of receipts		$14,166 38

EXPENDED.

For Biers	$28 00
Bricks	37 00
Car tickets	20 00
Cement and stone	61 36
Canvas	14 00
Cutting figures	78 88
Disinfectants	14 40
Directory	2 50
Fuel	102 33
Grave covers	71 27
Hardware and tools	191 02
Headstones (cleaning)	4 00
Hose	70 39
Labor, as per pay-roll	6,685 23
Land bought	412 78
Loam and manure	1,007 14
Lumber	20 65
Plants	264 50
Painting, glazing, and repairs	66 19
Ploughing snow	8 00
Postage	7 00
Seeds	5 50
Sods	598 86
Amount carried forward	$9,771 00

Amount brought forward . . .	$9,771 00	
For Stationery and printing	99 31	
Stone posts	188 50	
Superintendent, services of . .	1,299 96	
Teaming	64 00	
Water rates	164 92	
Total, as per item No. 5 of expenses		$11,587 69

Cemetery Fund.

Amount of fund, Nov. 30, 1880	$2,400 00

RECEIVED.

For perpetual care of lots in Cambridge Cemetery, as per item No. 5 of receipts	850 00
Amount of fund, Nov. 30, 1881	$3,250 00

Engineering.

Amount appropriated		$6,200 00
Deduct amount transferred from		264 59
		$5,935 41

EXPENDED.

For Assistants, services of	$3,125 94	
Bounds, stone	42 75	
Carriage hire	7 80	
Car tickets and fares	115 50	
Directory	2 50	
Expressage	1 05	
Hardware and tools	19 71	
Instruments and repairs	61 36	
Lithographs	5 02	
Printing and stationery	15 70	
Plans, binding	32 00	
Salary, W. S. Barbour, engineer .	2,500 00	
Shawsheen River examination . .	6 08	
Total, as per item No. 6 of expenses		$5,935 41

Fire Department.

Amount appropriated	$54,700 00
Estimated revenue	200 00
Add amount transferred to	821 90
	$55,721 90

RECEIVED.

For Rent of tenements	$199 94	
Refunded	17 00	
Manure	99 00	
Old material	17 56	
Total, as per item No. 6 of receipts	$333 50	

EXPENDED.

For Alarms for fires	$36 00	
Apparatus and repairs of same	2,443 66	
Bedding	20 44	
Directory	2 50	
Damages	31 10	
Enginemen, services of	29,714 17	
Expressage	51 50	
Fuel	1,236 99	
Gas	1,086 96	
Hardware and tools	133 51	
Harnesses and repairs	494 87	
Hats and badges	37 25	
Hay, grain, and straw	3,006 54	
Horse	500 00	
Horse-shoeing	393 28	
Horse hire	939 25	
Hose and repairs	1,246 72	
Houses, repairs of	1,570 05	
Hydrants and labor on	125 06	
Ice	58 00	
Printing	75 99	
Refreshments at fires	30 00	
Amount carried forward	$43,233 84	

Amount brought forward . . .	$43,233 84	
For Rent of shed	112 50	
Reservoir, covers, and repairs . .	44 82	
Salary, T. J. Casey, chief . . .	1,000 00	
Salary, R. F. Tobin, assistant . .	250 00	
Salary, N. W. Bunker, assistant .	250 00	
Salary, C. W. Brackett, assistant .	250 00	
Supplies at houses	272 46	
Telegraph supplies and repairs .	976 56	
Veterinary services	62 00	
Washing	329 72	
Water rates	165 00	
Water for hydrants	8,775 00	
Total, as per item No. 7 of expenses		$55,721 90

Health Department.

Amount appropriated		$2,000 00
Deduct amount transferred from		299 90
		$1,700 10

EXPENDED.

For Burning bedding	$33 50	
Car tickets	25 00	
Clerk of board, services of . . .	150 00	
Disinfectant	30 76	
Directory	2 50	
Expressage	6 05	
Nurse for small-pox patient, and board	128 82	
Printing	6 00	
Salary, A. F. Holt, health officer .	1,000 00	
Serving notices	5 88	
Stationery and printing	65 59	
Stamp	5 00	
Vaccinations	173 00	
Water, analysis of	65 00	
Total, as per item No. 8 of expenses		1,697 10
Balance unexpended		$3 00

Incidental Expenses.

Amount appropriated	$45,000 00
Amount appropriated in addition from excess of revenue	2,000 00
	$47,000 00
Deduct amount transferred from	7,820 37
	$39,179 63

RECEIVED.

For Armory rent from State	$800 00	
Banquet tickets (250th anniversary), sales of	535 00	
County fines	7 50	
Fees, collector's	1,063 59	
Fees, city clerk	1,601 06	
Fees, field driver	6 50	
Fees, sealer's	316 38	
Fees, weighers'	112 66	
Fees, milk inspector	265 00	
Gas	41 97	
Licenses, grease	134 00	
Licenses, liquor	19,925 00	
Old material	90 00	
Rent of public buildings	1,215 28	
Tax (old) of 1874	18 75	
Total, as per item No. 7 of receipts	$26,132 69	

EXPENDED.

For Advertising		$396 88	
Assessors, assistant		966 00	
Assessors, clerical assistance to		614 50	
Auditor, clerical assistance to		198 00	
For Anniversary, 250th, expenses, viz.:			
Advertising	$32 00		
Decorations	150 00		
Amounts carried forward,	$182 00	$2,175 38	$39,179 63

Amounts brought forward,	$182 00	$2,175 38	$39,179 63
Flowers	145 00		
Fares and carriage hire	177 80		
Labor	20 00		
Music	232 50		
Printing	289 35		
Refreshments	705 30		
Rent of Union Hall	66 00		
Ringing bells	39 00		
Reporting	26 00		
Salutes	75 00		
Volume (1,000 copies published)	879 76		
		2,837 71	
For Bells, ringing of		165 83	
Births, taking census of		325 00	
Bath-house repairs		50 00	
Books for weights and measures		9 50	
Carriage hire		44 00	
Car tickets		440 00	
Cemetery in Ward One, care and repairs of		40 09	
Church clocks, care and repairs of		179 70	
City clerk, clerical assistance to		52 85	
City Hall, clerical assistance, general		93 75	
Coal, weighing and screening		44 59	
Damages awarded Bridget Falvey,		689 24	
Damages awarded Sarah Piller		157 86	
Damages awarded Mrs. Black (to ice)		25 00	
Damages awarded Bartholomew Dunn		200 00	
Damages awarded Mary Wheeler,		360 25	
Damages awarded C. F. Kittridge, attorney (execution)		1,056 14	
Amounts carried forward		$8,946 89	$39,179 63

	Amounts brought forward . . .		$8,946 89	$39,179 63
For	Damages awarded, horse . . .		5 00	
	Decoration Day appropriation . .		500 00	
	Deaths, reporting		4 25	
	Deeds, recording		44 30	
	Directories		29 50	
	Displacement of tide-water . .		6 60	
	Experts, testimony and services of,		310 00	
	Expressage		49 30	
	Flagstaff repairs		10 50	
	Flowers		10 00	
	Fuel and care of fires		56 57	
	Garfield Memorial: —			
	Drapings	$75 36		
	Tolling bells . . .	8 00		
	Expenses of committee to and from Washington	123 56		
			206 92	
	Gas		9 59	
	Hay scale repairs		2 50	
	Historical tablets		391 00	
	Horse and wagon hire		92 50	
	High School exhibition		50 00	
	Invalid tax titles		1,204 10	
	Legal expenses, examining titles, etc.		437 59	
	License hearing (rent of Temple Hall)		15 00	
	Lumber and repairs (old mill, River Street)		17 50	
	Mill Pond, River Street		10,000 00	
	Milk analysis		12 50	
	Magnifying-glass and counterfeit detector		6 00	
	Newspapers		16 09	
	Notices, printing and distributing,		26 85	
	Notices, serving		29 25	
	Amounts carried forward . . .		$22,490 30	$39,179 63

	Amounts brought forward . . .		$22,490 30	$39,179 63
For	Ordinances, extra		35 00	
	Ordinances, binding		37 25	
	Page to Common Council . . .		50 00	
	Plans for Assessors		4 50	
	Post-office boxes, rent of . . .		8 00	
	Stamps, hand, and repairs . . .		19 00	
	Safety Deposit vault, rent of .		78 33	
	State proportion of liquor licenses,		5,423 95	
	Secretary of Sinking Funds, services of		25 00	
	Shawsheen River hearing . . .		33 00	
	Sealing weights and measures .		104 10	
	Treasurer, clerical assistance . .		2,644 54	
	Tax on estate purchased . . .		224 00	
	Tax title, adjustment of		80 00	
	Test weights		2 78	
	Test weights, printing act for sealing		4 50	
	Voting lists, posting		10 00	
	Ward officers		250 00	
	Ward rooms, rent and care of .		204 83	
	Water for Ward-room		9 00	
	City Hall: —			
	Cleaning	$568 51		
	Fuel	273 50		
	Gas	392 03		
	Ice	82 76		
	Janitor	1,050 00		
	Mats	31 13		
	Repairs	509 55		
	Supplies	48 31		
	Water	79 00		
			3,034 79	
	Central Square Building: —			
	Fire escape	$200 00		
	Gas	177 55		
	Amounts carried forward,	$377 55	$34,772 87	$39,179 63

Amounts brought forward,	$377 55	$34,772 87	$39,179 63
Janitor	1,140 00		
Repairs	167 28		
Supplies	25 25		
Water	84 34		
		1,794 42	
Ward One building: —			
Fuel	$257 80		
Gas	570 03		
Janitor	1,140 00		
Repairs	345 87		
Supplies	13 31		
Water	119 41		
		2,446 42	
Total, as per item No. 9 of expenses			39,013 71
Balance unexpended			$165 92

Interest.

Amount appropriated	$199,000 00
Estimated revenue	3,000 00
	$202,000 00
Add amount transferred	339 98
	$202,339 98

RECEIVED.

On taxes and assessments, as per item No. 8 of receipts . . .	$4,689 31

EXPENDED.

For Dowse Institute Fund . . .	$600 00	
Daniel White Charity Fund .	300 00	
Funded loan	190,680 00	
Cemetery Fund	166 50	
Sanders Temperance Fund . .	600 00	
Trustees Public Library . .	60 00	
Temporary loan	9,933 48	
Total, as per item No. 10 of expenses . . .		$202,339 98

Interest on Water Loan.

Amount transferred	$91,585 00

EXPENDED.

As per item No. 11 of expenses	91,201 00
Balance unexpended	$384 00

Lighting Streets.

Amount appropriated	$20,500 00
Deduct amount transferred from	1,161 76
	$19,338 24

RECEIVED.

Amount collected, as per item No. 9 of receipts	$28 94	

EXPENDED.

For Alcohol	$133 50	
Car tickets	5 00	
Carriage hire	6 00	
Directory and almanac	2 60	
Expressage	1 05	
Gas	11,943 85	
Hardware and tools	13 03	
Lamps, care of	5,924 95	
Lanterns, repairs of	484 53	
Ladders, repairs of	2 50	
Oil	164 15	
Printing	11 03	
Pipes and fittings	217 31	
Salary, B. F. Nourse, Supt.	350 00	
Torches	33 65	
United States Lighting Co., nine lamps for five months	45 00	
		19,338 15
Balance unexpended		$0 09

Loan (Temporary).

RECEIVED.

For city notes issued during the year, as per item No. 10 of receipts	$575,000 00

EXPENDED.

For city notes due and paid Oct. 10, 11, 12, and 13, 1881, as per item No. 13 of expenses .	$575,000 00

Loan (City Bonds).

EXPENDED.

For matured City Loan bonds, as per item No. 14 of expenses	$97,000 00

Loan (Water Bonds).

EXPENDED.

For matured Water Loan bonds, as per item No. 15 of expenses	$50,000 00

Pauper Department.

Amount appropriated		$12,000 00
Estimated revenue		4,000 00
		$16,000 00
Add amount transferred to		1,331 43
		$17,331 43

RECEIVED.

For aid to paupers, as per item No. 11 of receipts	$5,949 26	

EXPENDED.

For Boots and shoes	$110 80	
Car tickets and fares	276 44	
Clothing	36 84	
Carriage hire	10 00	
Copyist, services of	231 68	
Amount carried forward . . .	$665 76	

	Amount brought forward . . .	$665 76	
For	Criminals, support of	128 12	
	Cutting wood and labor	17 30	
	Directories	10 50	
	Express	8 05	
	Fuel	1,142 26	
	Groceries	2,224 12	
	Ice	6 25	
	Interest on disputed State bills .	53 85	
	Medical attendance	114 80	
	Medicines	286 39	
	Nurse	23 85	
	Paupers aid to	6,887 75	
	Paupers, board of	2,479 30	
	Paupers, burial of	268 09	
	Paupers, transportation of . . .	17 95	
	Postage	44 26	
	Printing	89 78	
	Rent of tenements and board . .	337 50	
	Secretary of Board, services of .	1,200 00	
	Stationery and furniture . . .	96 62	
	Telegrams	25	
	Visiting agents, services of . . .	1,200 00	
	Wagon repairs	28 68	
Total, as per item No. 16 of expenses			$17,331 43

Pauper Department (Almshouse).

Amount appropriated		$13,000 00
Estimated revenue		3,000 00
		$16,000 00
Add amount transferred to		402 54
		$16,402 54

RECEIVED.

For	Board of paupers	$322 56
	Stone and farm products . . .	2,907 51
Total, as per item No. 12 of receipts .		$3,230 07

EXPENDED.

For Bedding	$129 66
Boots and shoes	264 26
Bricks	15 00
Beds (renovating)	7 00
Car tickets and fares	10 00
Chaplain, services of	100 00
Christmas presents	12 75
Clocks, repairs of	4 50
Clothing	410 25
Crockery, and wooden and tin ware,	129 20
Directories	5 00
Dry goods	492 86
Disinfectants	28 56
Expressage	4 20
Fish	300 78
Fuel	1,745 03
Furnace	171 00
Groceries	2,962 09
Gas	221 34
Hardware and tools	206 94
Harnesses and repairs	128 07
Hay, grain, and straw	320 56
Horse clipping	5 00
Horse medicine	4 00
Horse-shoeing	41 50
Ice	99 50
Labor, as per pay-roll	1,863 57
Labor on farm and ledge	867 81
Lime and cement	10 00
Live stock	77 00
Lumber	222 47
Manure	105 30
Mason work	47 23
Medicines	146 53
Newspapers	21 00
Amount carried forward	$11,179 96

Amount brought forward . . .	$11,179 96	
For Oil	27 61	
Organist, services of	25 00	
Plumbing	260 48	
Powder and fuse	128 95	
Provisions	3,204 56	
Seeds	42 17	
Spectacles	3 50	
Veterinary surgeon	8 00	
Warden, services of	1,000 00	
Wagon repairs	89 99	
Washing	59 75	
Water rates	372 57	
Total, as per item No. 17 of expenses		$16,402 54

Pauper Department (House Offal).

Amount appropriated		$4,500 00
Estimated revenue		4,500 00
		$9,000 00
Deduct amount transferred from		1,482 18
		$7,517 82

RECEIVED.

For offal, as per item No. 13 of receipts	$5,536 88	

EXPENDED.

For Disinfectants	$30 96	
Harness repairs	57 99	
Hay, grain, and straw	1,190 72	
Horse	215 00	
Horse-shoeing	152 41	
Labor, as per pay-roll	5,443 50	
Printing	13 00	
Veterinary services	34 00	
Wagons	300 00	
Wagon repairs	79 77	
Total, as per item No. 18 of expenses		7,517 35
Balance unexpended		$0 47

Police Department.

Amount appropriated		$55,500 00
Estimated revenue		2,000 00
		$57,500 00
Less amount transferred from		486 67
		$57,013 33

RECEIVED.

For Conveyance of prisoners	$12 76	
Court fees	3,755 74	
Sale of horses	210 00	
Use of ropes, etc.	9 00	
Total, as per item No. 14 of receipts		$3,987 50

EXPENDED.

For Animals, burying of	$2 25	
Boat, care and use of	8 00	
Buttons and straps	68 98	
Carriage hire	12 00	
Directories	14 50	
Food for prisoners	63 17	
*Fuel	1,097 60	
Gas	522 21	
Hardware and tools	9 15	
Hay, grain, and straw	215 57	
Harnesses and repairs	73 12	
Horses	355 00	
Horse-shoeing	68 03	
Horse boarding	209 77	
Horse clipping	2 00	
Policemen, services of	51,869 95	
Printing and bill posting	22 00	
Prisoners, transportation of	6 80	
Repairs at stations	287 64	
Amount carried forward		$54,907 74

* The fuel consumed in Central Square Building was all charged to Police Department. This accounts for such a large amount.

Amount brought forward . . .	$54,907 74	
For Repairs of telegraph	18 68	
Salary of F. W. Hagar (chief) .	1,600 00	
Serving warrant	1 00	
Supplies at stations	189 80	
Surgical attendance and medicines,	17 78	
Telephone, putting in and rent of,	145 00	
Travelling expenses	37 08	
Vehicles, repairs of	55 25	
Water rates	41 00	
Total, as per item No. 19 of expenses		$57,013 33

Salaries.

Amount appropriated	$21,500 00
Add amount transferred to	504 58
	$22,004 58

EXPENDED.

Paid James M. W. Hall, mayor (balance)	$300 00	
James A. Fox, mayor	1,500 00	
Justin A. Jacobs, city clerk . .	3,000 00	
Walter W. Pike, assistant city clerk	1,166 67	
William W. Dallinger, city treasurer	3,000 00	
William W. Dallinger, treasurer of sinking funds	200 00	
Sam'l E. Chandler, city auditor .	375 00	
Franklin Perrin, city auditor .	1,125 00	
John McDuffie, clerk of committees	1,800 00	
J. Warren Cotton, clerk of Common Council	200 00	
Francis L. Pratt, city messenger,	1,400 00	
John W. Hammond, city solicitor	2,000 00	
Amount carried forward . . .	$16,066 67	

Amount brought forward . . .	$16,066 67	
Paid A. Z. Brown, assessor . . .	1,300 00	
E. B. Whitman, assessor . . .	1,300 00	
A. J. Green, assessor	1,300 00	
H. P. Walcott, city physician .	1,000 00	
Benj. F. Nourse, sealer of weights and measures	350 00	
John H. Farrell, inspector of milk	175 00	
John H. Farrell, inspector of vinegar, and fees allowed . . .	512 91	
Total, as per item No. 20 of expenses		$22,004 58

School Department (Drawing Schools).

Amount appropriated		$725 00
Deduct amount transferred from		17 91
		$707 09
Add amount transferred to		51 18
		$758 27
EXPENDED.		
For Advertising	$2 50	
Teachers, services of	698 00	
Janitor's services	51 18	
Total, as per item No. 21 of expenses		751 68
Balance unexpended		$6 59

School Department (Incidental Expenses).

Amount appropriated		$1,650 00
Deduct amount transferred from		331 17
		$1,318 83
EXPENDED.		
For Advertising	$12 25	
Apparatus and repairs	34 70	
Book-binding	72 09	
Amount carried forward . . .	$119 04	

Amount brought forward . . .	$119 04	
For Car tickets	47 25	
Chemicals	7 27	
Diplomas	128 75	
Erasers	13 15	
Examining pupils	7 50	
Librarian, services of	200 00	
Magoun testimonial	15 00	
Magazines and books	17 75	
Page to School Committee . . .	20 00	
Pianos, tuning	16 50	
Printing	400 62	
Secretary to School Committee .	300 00	
Statistics, collection of	6 00	
Tabulating census returns . . .	20 00	
Total, as per item No. 22 of expenses		$1,318 83

School Department (Salaries).

Amount appropriated	$133,600 00
Estimated revenue	1,300 00
	$134,900 00
Deduct amount transferred from	2,398 90
	$132,501 10

RECEIVED.

For Hopkins Fund, income of . . .	$770 07	
Tuition of non-resident pupils . .	166 00	
Total, as per item No. 15 of receipts .	$936 07	

EXPENDED.

For Superintendent of schools, salary .	$2,700 00	
Teachers, salaries of	127,101 10	
Truant officers, salaries of . . .	2,700 00	
Total, as per item No. 23 of expenses		$132,501 10

School Department (Text-Books and Stationery).

Amount appropriated		$3,700 00
Deduct amount transferred from		581 25
		$3,118 75

RECEIVED.

Amount refunded by Lee & Shepard, as per item No. 16 of receipts,	$1 00	

EXPENDED.

For Books	$2,331 25	
Stationery	776 20	
Total, as per item No. 24 of expenses		3,107 45
Balance unexpended		$11 30

School-Houses (Care and Repair).

Amount appropriated		$29,000 00
Add amount transferred to		1,075 57
		$30,075 57
Deduct amount transferred from		51 18
		$30,024 39

EXPENDED.

For Advertising	$3 34	
Blackboards	50 17	
Brushes	121 60	
Clocks and bells, repairs of	60 10	
Expressage	26 10	
Fuel	7,003 54	
Furniture and repairs	971 50	
Gas	266 92	
Gravel	13 00	
Grading	10 17	
Hardware and tools	244 46	
Inkstands and wells	192 96	
Amount carried forward	$8,963 86	

Amount brought forward . .	$8,963 86	
For Janitors, services of	7,981 15	
Janitors' supplies	80 62	
Lumber	68 87	
Mats and shades	427 54	
Printing	5 90	
Repairs, carpenter work . . .	907 18	
Repairs, heating apparatus . .	212 58	
Repairs, mason work	599 68	
Repairs, painting and glazing .	446 70	
Repairs, plumbing	312 70	
Repairs, general	1,282 46	
Survey of Summer Street, plan,	4 55	
Teaming	9 00	
Washing	1 00	
Water rates	544 48	
Weighing coal	42 80	
	$21,891 07	
Fire escapes	563 84	
New school-house in Ward Three	7,569 48	
Total, as per item No. 25 of expenses		$30,024 39

Sewers (Construction).

Amount appropriated	$4,100 00
Estimated revenue	400 00
	$4,500 00
Add amount transferred to	5,000 00
	$9,500 00

RECEIVED.

For assessments, as per item No. 17 of receipts	$3,788 11	

EXPENDED.

For Binding plans	$32 00	
Boring	9 25	
Amounts carried forward . . .	$41,25	$9,500 00

Amounts brought forward . . .	$41 25	$9,500 00
For Catch-basins	528 95	
Cement, bricks, and sand . . .	1,293 70	
Covers, iron	119 68	
Drain pipe and laying	2,210 87	
Expressage	9 50	
Horse hire	81 25	
Labor	2,732 43	
Lumber and labor	30 95	
Inspection	200 00	
Paving	99 28	
Piles, driving (Vine Street sewer),	74 56	
Printing	25 50	
Refunded assessments	145 27	
Sewers, constructing	1,812 11	
Stone work	21 00	
Teaming	26 35	
Tide gate	26 45	
Tools	10 57	
Total, as per item No. 26 of expenses		9,489 67
Balance unexpended		$10 33

Sewers (Maintenance).

Amount appropriated	$6,600 00
Estimated revenue	900 00
	$7,500 00
Add amount transferred to	511 96
	$8,011 96

RECEIVED.

For Castings	$6 52	
Somerville's proportion of cleaning outlet of Bridge Street Sewer	972 70	
Sewer ring and cover	5 00	
Amount carried forward . . .	$984 22	

Amount brought forward . . .	$984	22
For Resetting stone	12	54
Use of portable engine	485	00
Total, as per item No. 18 of receipts,	$1,481	76

EXPENDED.

For Advertising	$3	75
Bricks and paving	84	65
Catch-basins, cleaning	1,642	00
Castings	112	21
Cement and clay	82	60
Couplings and piping	43	99
Dredging Bridge Street outlet, five ninths paid by Somerville .	1,307	80
Expressage and fares	38	67
Engine repairs	35	57
Foreman's services	406	00
Fuel for engine	29	75
Gravel	9	50
Hardware, tools, and repairs . .	164	86
Horse and wagon	138	25
Iron work	47	98
Labor	1,744	51
Lumber	217	52
Manhole repairs, mason and stone work	98	35
Pipe (drain)	257	51
Pulley, new, for engine	26	50
Pump	38	15
Printing	6	25
Rubber and oiled clothing . . .	48	35
Sewers, cleaning and repairs . .	915	10
Teaming	415	90
Water	96	24
Total, as per item No. 27 of expenses		$8,011 96

Shade Trees and Public Grounds.

Amount appropriated		$3,000 00
Deduct amount transferred from		1,006 35
		$1,993 65
RECEIVED.		
For trees, as per item No. 19 of receipts	$6 00	
EXPENDED.		
For Fences, repairs of	$48 45	
Flag-poles and repairs	51 25	
Gravel	62 45	
Hardware and tools	98 28	
Horse-shoeing	3 50	
Labor, as per pay-roll	971 25	
Lumber	63 86	
Pumps and repairs	10 04	
Scales, repairs of	32 01	
Tarred paper and rope	5 16	
Tar	1 75	
Water	645 47	
Total, as per item No. 28 of expenses		1,993 47
Balance unexpended		$0 18

Sinking Funds, Commissioners of.

Amount of funds Nov. 30, 1880		$1,233,559 71
RECEIVED.		
From city treasurer, amount appropriated by City Council	$164,865 00	
Interest accumulations to Nov. 30, 1881	57,967 16	
		222,832 16
Amount of funds Nov. 30, 1881		$1,456,391 87
EXPENDED.		
For matured City Loan bonds		100,000 00
		$1,356,391 87

Sinking Fund of Water Works, Trustees of.

Amount of fund Nov. 30, 1880		$414,568 48
RECEIVED.		
For amount of revenue transferred from Water Works (Rates, Fines, etc.)	$45,855 00	
Interest accumulations to Nov. 30, 1881	17,206 83	
		63,061 83
		$477,630 31
EXPENDED.		
For amount of matured Water Loan bonds		50,000 00
		$427,630 31

State Aid.

Amount transferred to		$3,405 25
Estimated receipts		14,750 00
		$18,155 25
RECEIVED.		
For Allotment from Commonwealth	$14,718 47	
Amount reimbursed from other cities and towns	433 00	
Total, as per item No. 22 of receipts	$15,151 47	
EXPENDED.		
For Clerical assistance to committee	$278 75	
Indigent soldiers	4,913 00	
Military aid	12,963 50	
Total, as per item No. 31 of expenses		$18,155 25

Stationery and Printing.

Amount appropriated	$3,000 00
Amount transferred	72 35
	$3,072 35

EXPENDED.

For Printing	$2,063 99	
Stationery	1,008 36	
Total, as per item No. 32 of expenses		$3,072 35

Street Department (Paving).

Amount appropriated		$6,000 00
Add amount transferred to		457 77
		$6,457 77

EXPENDED.

For Bricks	$387 00	
Labor, as per pay-roll	231 75	
Paving	4,735 79	
Sand	42 80	
Stone, edge	10 28	
Stone flagging	408 12	
Stone (paving blocks)	628 77	
Total, as per item No. 33 of expenses		6,444 51
Balance unexpended		$13 26

Street Department (Repairs).

Amount appropriated		$60,000 00
Estimated revenue		200 00
		$60,200 00
Add amount transferred to		1,811 89
		$62,011 89

RECEIVED.

For Ashes and street scrapings	$488 85
Stone	89 03
Bricks	60 50
Roller	25 00
Amount carried forward	$663 38

Amount brought forward . . .	$663 38
For Blocks	1 25
Cutting down trees	9 00
Scraping trees	1 00
Total, as per item No. 23 of receipts	$674 63

EXPENDED.

For Blankets	$64 00
Car tickets and fares	20 60
Carts, repairs of	261 50
Carpenter work	93 28
Castings	177 54
Directory	2 50
Freight	1 60
Gas	117 11
Gravel	2,941 74
Gravel teaming	5,886 50
Gravel bank landmarks	4 50
Hardware and tools	857 23
Horses	900 00
Horse-shoeing	521 74
Hay, grain, straw, and salt . .	4,308 67
Harness and repairs	226 37
Iron work	31 23
Labor, as per pay-roll	34,247 92
Land, rent of	60 00
Lumber	682 70
Mason work and cement . . .	61 32
Oil and grease	53 17
Printing	5 50
Plumbing	10 69
Salary, B. W. Woodard, superintendent	1,700 00
Signs, street	31 00
Stable hire	5 00
Stone	8,238 91
Stone crusher repairs	21 24
Amount carried forward . . .	$61,533 56

Amount brought forward . . .	$61,533 56	
For Sand	27 12	
Supplies, various	35 20	
Sleigh	80 00	
Veterinary services and medicine,	97 05	
Water rates	238 96	
Total, as per item No. 34 of expenses		$62,011 89

Street Department (Watering).

Amount appropriated	$9,000 00
Estimated revenue	9,000 00
	$18,000 00
Deduct amount transferred from	3,407 77
	$14,592 23

RECEIVED.

For watering streets from sundry persons, as per item No. 24 of receipts	$8,648 23	

EXPENDED.

For Carts, repairs of	$295 86	
Engine, use of	320 00	
Hand stamp	5 00	
Hose.	42 50	
Printing bill heads	3 50	
Standpipes, repairs of	77 45	
Teaming	14 00	
Water	4,121 62	
Watering streets	9,712 30	
Total, as per item No. 35 of expenses		$14,592 23

Surrendered Estates.

Estimated revenue	$600 00
Deduct amount transferred from	600 00

RECEIVED.

For Grading assessments, Cambridge Street District	$834 91	
Grading assessments, Cowperthwaite Street District	306 09	
Grading assessments, Franklin Street District	63 00	
Grading assessments, Sparks Street District	139 41	
Grading assessments, Washington Street District	531 12	
Total, as per item No. 25 of receipts		$1,874 53

Surrendered Estates (Care and Repairs).

Estimated revenue		$800 00
Deduct amount transferred from		269 23
		$530 77

RECEIVED.

For rents, as per item No. 26 of receipts	$1,098 49	

EXPENDED.

For Agent, J. W. Coveney	$299 70	
Care of sidewalk	5 00	
Fares	2 60	
Printing and posting bills	13 00	
Repairs, carpenter work	24 10	
Repairs, miscellaneous	24 84	
Repairs, painting and glazing	6 10	
Repairs, plumbing	55 56	
Vaults, cleaning	4 00	
Water rates	95 87	
Total, as per item No. 36 of expenses		$530 77

Surrendered Estates (Sale Account).

RECEIVED.

For payments on estates, as per item No. 27 of receipts	$4,610 00

EXPENDED.

For refunded payment, as per item No. 37 of expenses	85 00
	$4,525 00

Tax, Corporation.

RECEIVED.

For amount due from Commonwealth, as per item No. 28 of receipts	$40,594 93

EXPENDED.

For amount returned to Commonwealth, as per item No. 39 of expenses	48 61
Balance of receipts	$40,546 32

Tax, National Bank.

RECEIVED.

For amount received from Commonwealth, as per item No. 29 of receipts	$21,190 89

EXPENDED.

For amount paid Commonwealth, as per item No. 38 of expenses	5,796 91
Balance of receipts	$15,393 98

Tax, County.

EXPENDED.

For amount paid County of Middlesex, as per item No. 40 of expenses	$26,208 53

Tax, State.

EXPENDED.

For amount paid Commonwealth, as per item No. 41 of expenses	$52,155 00

Taxes of 1878.

Amount uncollected, Nov. 30, 1880	$7,650 67

RECEIVED.

For amount collected from sundry persons, as per item No. 30 of receipts	42 00
Balance uncollected Nov. 30, 1881	$7,608 67

Taxes of 1879.

Amount uncollected Nov. 30, 1880	$10,596 54

RECEIVED.

For amount collected from sundry persons, as per item No. 31 of receipts	1,746 22
Balance uncollected Nov. 30, 1881	$8,850 32

Taxes of 1880.

Amount uncollected Nov. 30, 1880	$72,534 65
Amount since added	585 30
	$73,119 95

RECEIVED.

For amount collected from sundry persons, as per item No. 32 of receipts	62,605 07
Balance uncollected Nov. 30, 1881	$10,514 88

Taxes of 1881.

Amount assessed as per assessors' warrants . .	$849,958 61
Amount since added	772 00
	$850,730 61

RECEIVED.

For amount collected from sundry persons, as per item No. 33 of receipts	782,167 77
Balance uncollected Nov. 30, 1881	$68,562 84

Tax Lien Account.

Balance Nov. 30, 1880	$23,916 24

EXPENDED.

Amount, as per item No. 42 of expenses	77 91
	$23,994 15

RECEIVED.

For amount, as per item No. 34 of receipts . . .	6,450 84
Balance Nov. 30, 1881	$17,543 31

Water Works (Construction).

Amount appropriated		$20,000 00

EXPENDED.

For Boats, use of	$10 00	
Engine on border of Fresh Pond .	1,806 50	
Engine, use of at Pond	36 75	
Engineer	47 25	
Fuel	19 50	
Hardware and tools	89 25	
Iron work	58 45	
Labor, as per pay-roll	863 03	
Lead	112 45	
Lumber for pipe house at Brookline Bridge	216 40	
Amounts carried forward . . .	$3,259 58	$20,000 00

	Amounts brought forward . . .	$3,259 58	$20,000 00
For	Mason work at border of Pond .	19 50	
	Meters	194 25	
	Packing	17 84	
	Paving	18 90	
	Piles and driving at border of Pond,	713 97	
	Pump at borders of Pond . . .	490 00	
	Painting	135 00	
	Pipes	1,204 80	
	Pumping house at border of Pond,	477 22	
	Stone	25 16	
	Swing valves	232 65	
	Teaming	35 94	
	Total, as per item No. 43 of expenses . . .		6,824 81
	Balance unexpended		$13,175 19

Water Works (Maintenance).

Estimated revenue			$30,000 00
	EXPENDED.		
For	Advertising	$24 63	
	Analysis of water	110 00	
	Belting	3 78	
	Blacksmithing	218 99	
	Bricks	4 50	
	Car tickets and fares	95 56	
	Castings	90 33	
	Civil engineer, expert, Shawsheen River	100 00	
	Clerk of board	200 00	
	Clerical aid	983 33	
	Directories	9 50	
	Engineer at supply pump . . .	66 00	
	Expressage	9 15	
	Amounts carried forward . . .	$1,915 77	$30,000 00

	Amounts brought forward . . .	$1,915 77	$30,000 00
For	Furniture at pumping house . .	25 63	
	Fuel	1,954 35	
	Gate and hydrant boxes and lumber	481 27	
	Gravel	52 49	
	Hardware and tools	264 45	
	Harnesses, repairs of	31 70	
	Hay, grain, and straw	315 07	
	Horse keeping	124 10	
	Horse-shoeing	75 80	
	Horse clipping and veterinary services	8 75	
	Horse hire	10 00	
	Hose	25 00	
	Hydrants, repairs on	116 88	
	Inspectors' services	1,152 50	
	Labor, as per pay-roll	9,663 47	
	Lime and cement	31 25	
	Manure and grass seed	21 26	
	Mason work	48 85	
	Machinery, repairs of	6 28	
	Meters, repairs of	31 18	
	Mowing, Tudor Park	10 00	
	Newspapers	8 50	
	Oil, waste, and packing	232 28	
	Painting	263 13	
	Paving	3 60	
	Pipes and fitting	1,212 58	
	Pipe bridge, repairs of	125 77	
	Plumbing	29 73	
	Postage	83 00	
	Printing	118 10	
	Pumping house, repairs at . . .	59 78	
	Raising house and repairing shed at pipe yard	414 00	
	Amounts carried forward . . .	$18,916 52	$30,000 00

Amounts brought forward . . .	$18,916 52	$30,000 00
For Registrar, J. Warren Cotton, salary	2,000 00	
Rent of office	400 00	
Rent of shop	200 00	
Rent of wharf	50 00	
Repair of leak	6 80	
Removing night soil	8 00	
Salt	15 15	
Stationery and account books . .	76 03	
Superintendent, Hiram Nevons, salary	1,800 00	
Supply pump, fittings, and repairs,	75 69	
Teaming	71 20	
Telephone, repairs and telegraphing	9 23	
Travelling expenses	26 32	
Wagons, repairs of	174 45	
Whitewashing	4 50	
Total, as per item No. 44 of expenses		23,833 89
Balance unexpended		$6,166 11

Water Works (Rates, Fines, etc.).

RECEIVED.

For amount of rates, fines, etc., as per item No. 35 of receipts	$171,970 02
Less amount transferred	167,440 00
	$4,530 02

EXPENDED.

For water rates refunded, as per item No. 45 of expenses	1,072 79
Balance unexpended	$3,457 23

Water Works (Supplies).

Estimated revenue		$3,000 00
RECEIVED.		
For supply pipes and fittings, as per item No. 36 of receipts	$3,710 78	
EXPENDED.		
For Labor, as per pay-roll	$870 09	
Pipes and fittings	2,058 59	
Total, as per item No. 46 of expenses		2,928 68
Balance unexpended		$71 32

REPORT

OF

THE CITY TREASURER.

OFFICE OF CITY TREASURER, CAMBRIDGE, DEC. 1, 1881.

To the Honorable the City Council:—

THE undersigned herewith presents the annual report of the transactions of the City Treasury for the year ending Nov. 30, 1881. From the detailed account hereto appended, it will be seen that the

Cash balance in the treasury, Nov. 30, 1880, was	$35,203 28
Amount received during the year ending Nov. 30, 1881, was	1,923,509 17
Total	$1,958,712 45
Payments during the year amounted to . . .	1,955,427 30
Leaving a balance in the treasury, Nov. 30, 1881, of	$3,285 15

Every bill approved and drawn for by the Mayor prior to Dec. 1, 1881, has been paid.

Respectfully submitted,

WM. W. DALLINGER, *City Treasurer.*

City of Cambridge in Account Current from Dec. 1, 1880, to

Dr.

No.	To authorized payments charged to City Accounts as follows: —	
1.	Abatements and Discounts	$44,766 89
2.	Bridges	2,519 16
3.	Bridges (West Boston, Craigie's, and Prison Point)	5,909 74
4.	Cambridge Public Library	6,561 22
5.	Cemeteries	11,589 40
6.	Engineering	5,971 71
7.	Fire Department	55,954 47
8.	Health Department	1,697 10
9.	Incidental Expenses	39,228 65
10.	Interest	202,339 98
11.	Interest on Water Loan	91,201 00
12.	Lighting Streets	19,486 65
13.	Loan, Temporary	575,000 00
14.	Loan, City	97,000 00
15.	Loan, Water	50,000 00
16.	Pauper Department	19,588 82
17.	Pauper Department (Almshouse)	16,787 75
18.	Pauper Department (House Offal)	7,517 35
19.	Police Department	57,097 18
20.	Salaries	22,004 58
21.	School Department (Drawing Schools)	751 68
22.	School Department (Incidental Expenses)	1,356 58
23.	School Department (Salaries)	132,501 10
24.	School Department (Text-Books and Stationery)	3,173 74
25.	School-Houses (Care and Repair)	30,175 24
26.	Sewers (Construction)	9,489 67
27.	Sewers (Maintenance)	8,011 96
28.	Shade Trees and Public Grounds	2,014 97
29.	Sinking Funds	164,865 00
30.	Sinking Fund of Water Works	45,855 00
31.	State Aid	18,155 25
32.	Stationery and Printing	3,150 89
33.	Street Department (Paving)	6,593 31
34.	Street Department (Repairs)	62,069 83
35.	Street Department (Watering)	15,081 75
36.	Surrendered Estates (Care and Repair)	531 27
37.	Surrendered Estates (Sale Account)	85 00
38.	Tax, National Bank	5,796 91
39.	Tax, Corporation	48 61
40.	Tax, County	26,208 53
41.	Tax, State	52,155 00
42.	Tax Lien Account	77 91
43.	Water Works (Construction)	6,838 81
44.	Water Works (Maintenance)	24,216 17
45.	Water Works (Rates, Fines, etc.)	1,072 79
46.	Water Works (Supplies)	2,928 68
	Total payments	$1,955,427 30
	Cash balance in the treasury, Nov. 30, 1881	3,285 15
		$1,958,712 45

Nov. 30, 1881, with William W. Dallinger, *City Treasurer.*

Cr.

No.	By Cash received and credited to City Accounts as follows: —	
1.	Bills Receivable	$2,411 00
2.	Bridges (West Boston, Craigie's, and Prison Point)	119 34
3.	Cambridge Public Library	2,325 49
4.	Cemeteries	14,166 38
5.	Cemetery Fund	850 00
6.	Fire Department	333 50
7.	Incidental Expenses	26,132 69
8.	Interest	4,689 31
9.	Lighting Streets	28 94
10.	Loan, Temporary	575,000 00
11.	Pauper Department	5,949 26
12.	Pauper Department (Almshouse)	3,230 07
13.	Pauper Department (House Offal)	5,536 88
14.	Police Department	3,987 50
15.	School Department (Salaries)	936 07
16.	School Department (Text-Books and Stationery)	1 00
17.	Sewers (Construction)	3,788 11
18.	Sewers (Maintenance)	1,481 76
19.	Shade Trees and Public Grounds	6 00
20.	Sinking Funds (Commissioners of)	100,000 00
21.	Sinking Fund of Water Works (Trustees of)	50,000 00
22.	State Aid	15,151 47
23.	Street Department (Repairs)	674 63
24.	Street Department (Watering)	8,648 23
25.	Surrendered Estates	1,874 53
26.	Surrendered Estates (Care and Repair)	1,098 49
27.	Surrendered Estates (Sale Account)	4,610 00
28.	Tax (Corporation)	40,594 93
29.	Tax (National Bank)	21,190 89
30.	Taxes, 1878	42 00
31.	Taxes, 1879	1,746 22
32.	Taxes, 1880	62,605 07
33.	Taxes, 1881	782,167 77
34.	Tax Lien Account	6,450 84
35.	Water Works (Rates, Fines, etc.)	171,970 02
36.	Water Works (Supplies)	3,710 78
	Total receipts	$1,923,509 17
	Cash balance in the treasury, Dec. 1, 1880	35,203 28
		$1,958,712 45

WM. W. DALLINGER, *City Treasurer.*

REPORT

OF THE

COMMISSIONERS OF THE SINKING FUNDS.

To the Honorable City Council: —

THE undersigned, Commissioners of the Sinking Funds of the city, in compliance with Sect. 8 of an ordinance passed Dec. 22, 1875, herewith present their sixth annual report, showing the present condition of the funds to be as follows, viz: —

Amount of the funds Dec. 1, 1880 . . .	$1,233,559 71	
Amount of interest received during the year on investments	65,869 74	
Amount of premium received during the year on bonds exchanged	14 00	
Amount received from the City of Cambridge derived from taxation . . .	164,865 00	
		$1,464,308 45
Amount paid for accrued interest on bonds purchased during the year . .	$2,528 83	
Amount paid for premium on bonds purchased during the year	5,387 75	
Amount paid City Treasurer of Cambridge to pay matured City Loan Bonds	100,000 00	
		107,916 58
Amount of the funds Nov. 30, 1881, *all securities taken at par*		$1,356,391 87

SECURITIES BELONGING TO THE SINKING FUNDS, NOV. 30, 1881.

Cambridge City Loan, five per cent bonds, maturing Aug. 1, 1882 . .	$500 00
Cambridge City Loan, five per cent bonds, maturing Sept. 10, 1882 . .	2,000 00
Cambridge Funding Loan, six per cent bonds, maturing April 1, 1883 . . .	26,000 00
Cambridge Low-land Loan, six per cent bonds, maturing July 1, 1883 . . .	134,000 00
Amount carried forward	$162,500 00

Amount brought forward	$162,500 00	
Cambridge Building Loan, six per cent bonds, maturing July 1, 1883 . . .	33,000 00	
Cambridge Water Loan, six per cent bonds, maturing Aug. 1, 1883 . . .	3,100 00	
Cambridge Low-land Loan, six per cent bonds, maturing April 1, 1884 . .	19,000 00	
Cambridge Building Loan, six per cent bonds, maturing April 1, 1884 . .	22,000 00	
Cambridge Bridge Loan, six per cent bonds, maturing July 1, 1884 . . .	9,000 00	
Cambridge Funding Loan, six per cent bonds, maturing July 1, 1884 . . .	7,000 00	
Cambridge Low-land Loan, six per cent bonds, maturing Oct. 1, 1884 . . .	2,000 00	
Cambridge Funding Loan, six per cent bonds, maturing July 1, 1885 . . .	24,000 00	
Cambridge Bridge Loan, six per cent bonds, maturing July 1, 1885 . . .	26,000 00	
Cambridge Building Loan, six per cent bonds, maturing July 1, 1885 . . .	17,000 00	
Cambridge Low-land Loan, six per cent bonds, maturing July 1, 1885 . . .	122,000 00	
Cambridge Low-land Loan, six per cent bonds, maturing July 1, 1886 . . .	27,000 00	
Cambridge Street-widening Loan, six per cent bonds, maturing July 1, 1886 .	3,000 00	
Cambridge City Loan, six per cent bonds, maturing July 1, 1886	1,000 00	
Cambridge Low-land Loan, five per cent bonds, maturing Oct. 1, 1887 . . .	120,000 00	
Cambridge Sewer Loan, six per cent bonds, maturing July 1, 1896 . . .	11,000 00	
Cambridge Street-widening Loan, six per cent bonds, maturing July 1, 1904 .	90,000 00	
Cambridge Sewer Loan, six per cent bonds, maturing July 1, 1904 . . .	2,000 00	
Cambridge Street-widening Loan, six per cent bonds, maturing July 1, 1905 . .	14,000 00	
Cambridge Sewer Loan, six per cent bonds, maturing July 1, 1905 . . .	49,000 00	
		$763,600 00
City of Salem four and one fourth per cent bonds, maturing Oct. 11–14, 1882,	$10,000 00	
City of Boston five per cent coupon bonds, maturing Jan. 1, 1883	3,000 00	
Amounts carried forward	$13,000 00	$763,600 00

Amounts brought forward	$13,000 00	$763,600 00
State of Massachusetts five per cent coupon bonds, maturing July 1, 1883,	5,000 00	
City of Providence five per cent coupon bonds, maturing Sept. 1, 1883 . . .	1,000 00	
City of Charlestown five per cent coupon bonds, maturing Oct. 1, 1883 . . .	2,000 00	
City of Chelsea five and one half per cent coupon bonds, maturing Oct. 15, 1883,	19,000 00	
City of Boston five per cent coupon bonds, maturing Jan. 1, 1884	1,000 00	
City of Manchester, N. H., six per cent coupon bonds, maturing April 1, 1884,	1,000 00	
Town of Weymouth four per cent bonds, maturing April 1, 1884	5,000 00	
City of Boston five per cent registered bonds, maturing July 1, 1884 . . .	1,000 00	
City of Boston five per cent coupon bonds, maturing July 1, 1884	2,000 00	
City of Lynn five and one half per cent coupon bonds, maturing Aug. 15, 1884 .	4,000 00	
State of Maine four per cent coupon bonds, maturing Aug. 15, 1884	19,000 00	
State of New Hampshire six per cent coupon bonds, maturing Sept. 1, 1884,	2,000 00	
State of New Hampshire six per cent coupon bonds, maturing Sept. 1, 1884,	1,000 00	
City of Somerville six and one half per cent coupon bonds, maturing Oct. 1, 1884	5,000 00	
City of Roxbury six per cent coupon bonds, maturing Nov. 1, 1884 . . .	2,000 00	
Town of Holbrook four per cent bonds, maturing Nov. 10, 1884	4,000 00	
City of Boston five per cent registered bonds, maturing April 1, 1885 . . .	5,000 00	
City of Worcester six per cent coupon bonds, maturing July 1, 1885 . . .	1,000 00	
State of Maine four per cent coupon bonds, maturing Aug. 15, 1885 . .	19,000 00	
City of Boston five per cent coupon bonds, maturing Jan. 1, 1886	4,000 00	
State of Maine four per cent coupon bonds, maturing Aug. 15, 1886	24,000 00	
City of Boston five per cent coupon bonds, maturing April 1, 1887	1,000 00	
Amounts carried forward	$141,000 00	$763,600 00

Amounts brought forward	$141,000 00	$763,600 00
Town of Woburn five per cent bonds maturing July 2–5, 1887	20,000 00	
City of Somerville five per cent coupon bonds, maturing Oct. 1, 1887 . . .	19,000 00	
Town of Winchester five per cent coupon bonds, maturing April 1, 1888 . . .	5,000 00	
Town of Brookline four and one half per cent coupon bonds, maturing July 1, 1890	19,000 00	
Town of Scituate four per cent bonds, maturing Jan. 1, 1891	20,000 00	
Town of Waltham four per cent coupon bonds, maturing Sept. 1, 1891 . . .	46,000 00	
United States four and one half per cent coupon bonds, maturing after Sept. 1, 1891	57,000 00	
Town of Arlington five per cent coupon bonds, maturing Nov. 1, 1892 . . .	6,000 00	
City of Boston four per cent coupon bonds, maturing Jan. 1, 1899 . . .	50,000 00	
City of Providence four and one half per cent coupon bonds, maturing June 1, 1899	116,000 00	
United States four per cent registered bonds, maturing after July 1, 1907 .	70,000 00	
United States four per cent coupon bonds, maturing after July 1, 1907 .	300 00	
United States three and one half per cent registered bonds, maturing at pleasure of the government . . .	11,000 00	
City of Cambridge (gravel) note bearing no interest, maturing July 1, 1882 .	2,717 46	
City of Cambridge (gravel) note bearing no interest, maturing July 1, 1883 .	2,717 46	
City of Cambridge (gravel) note bearing no interest, maturing July 1, 1884 .	2,717 46	
Cash on deposit in the First National Bank of Cambridge	4,339 49	
		592,791 87
		$1,356,391 87

RECAPITULATION.

Cambridge city and water bonds bearing six per cent interest	$641,100 00
Cambridge city and water bonds bearing five per cent interest	122,500 00
Amount carried forward	$763,600 00

Amount brought forward	$763,600 00	
State, city, and town bonds bearing six and one half per cent interest . .	5,000 00	
State, city, and town bonds bearing six per cent interest	7,000 00	
State, city, and town bonds bearing five and one half per cent interest . . .	23,000 00	
State, city, and town bonds bearing five per cent interest	75,000 00	
State, city, and town bonds bearing four and one half per cent interest . . .	135,000 00	
State, city, and town bonds bearing four and one fourth per cent interest . .	10,000 00	
State, city, and town bonds bearing four per cent interest	187,000 00	
United States bonds bearing four and one half per cent interest	57,000 00	
United States bonds bearing four per cent interest	70,300 00	
United States bonds bearing three and one half per cent interest	11,000 00	
Cambridge (gravel) notes bearing no interest	8,152 38	
Cash on hand	4,339 49	
		$1,356,391 87
The value of *accrued interest* on above securities is		20,707 70
Making the actual value of the funds, Nov. 30, 1881		$1,377,099 57

The bonded city debt which the foregoing sinking funds are expected to pay matures as follows, viz. : —

July 1, 1882, Low-land Loan Bonds	$15,000 00
Aug. 1, 1882, City Loan Bonds	30,000 00
Sept. 10, 1882, City Loan Bonds	40,000 00
Nov. 20, 1882, City Loan Bonds	14,000 00
April 1, 1883, Funding Loan Bonds	216,000 00
July 1, 1883, Building Loan Bonds	119,000 00
July 1, 1883, Low-land Loan Bonds	270,000 00
April 1, 1884, Building Loan Bonds	198,000 00
April 1, 1884, Low-land Loan Bonds	240,000 00
July 1, 1884, Bridge Loan Bonds	94,000 00
July 1, 1884, Funding Loan Bonds	100,000 00
Oct. 1, 1884, Low-land Loan Bonds	56,000 00
July 1, 1885, Bridge Loan Bonds	26,000 00
July 1, 1885, Building Loan Bonds	17,000 00
Amount carried forward.	$1,435,000 00

Amount brought forward	$1,435,000 00
July 1, 1885, Funding Loan Bonds	24,000 00
July 1, 1885, Low-land Loan Bonds	122,000 00
July 1, 1886, City Loan Bonds	100,000 00
July 1, 1886, Low-land Loan Bonds	60,000 00
July 1, 1886, Street-widening Loan Bonds	7,000 00
Oct. 1, 1887, Low-land Loan Bonds	120,000 00
April 1, 1889, City Loan Bonds	100,000 00
July 1, 1890, City Loan Bonds	20,000 00
Jan. 1, 1893, City Loan Bonds	150,000 00
July 1, 1893, Land Loan Bonds	10,000 00
July 1, 1893, Paving Loan Bonds	100,000 00
July 1, 1893, Street Loan Bonds	13,000 00
July 1, 1894, Paving Loan Bonds	130,000 00
July 1, 1895, Paving Loan Bonds	25,000 00
Oct. 1, 1895, Sewer Loan Bonds	20,000 00
July 1, 1896, Sewer Loan Bonds	29,000 00
July 1, 1903, Sewer Loan Bonds	136,000 00
July 1, 1903, Street-widening Loan Bonds	10,000 00
July 1, 1904, Sewer Loan Bonds	295,000 00
July 1, 1904, Street-widening Loan Bonds	90,000 00
July 1, 1905, Sewer Loan Bonds	144,000 00
July 1, 1905, Street-widening Loan Bonds	14,000 00
	$3,154,000 00

The result of the year shows an increase of $122,832.16 in the funds after paying $100,000 of the city debt which became due July 1, leaving the present amount of the funds $1,356,-391.87. During the past five years $282,000 of the city debt has matured and been paid from the funds. In 1882 there will become due $99,000, in 1883 $605,000, and in 1884 $688,000, which will be met from these funds, leaving the amount of city debt proper, Oct. 1, 1884, $1,762,000, instead of $3,406,953 in 1877, when at its maximum. There will then remain in the funds, towards the payment of the remaining debt as now estimated, about $600,000. The average rate of interest which the funds are now earning is 5.21.

Respectfully submitted,

CHAS. H. SAUNDERS,
JOHN M. TYLER,
K. S. CHAFFEE,
ROBT. DOUGLASS,
JOS. A. HOLMES,
FRANK A. ALLEN,

Commissioners of the Sinking Funds of the City of Cambridge.

REPORT

OF THE

TRUSTEES OF THE SINKING FUND OF THE CAMBRIDGE WATER WORKS.

To the Honorable the City Council:—

THE undersigned, Trustees of the Sinking Fund of the Cambridge Water Works, herewith submit the annual report of the fund committed by ordinance to their charge.

The amount of the fund Dec. 1, 1880, was	$414,568 48	
There has been received during the year, interest on investments amounting to	22,291 50	
There has been received premium on securities sold, amounting to . . .	1,985 00	
There has been received from the city of Cambridge three per cent on the amount of outstanding water bonds, viz.:	45,855 00	
		$484,699 98
Amount paid for accrued interest on securities purchased for investment .	$1,079 67	
Amount paid as premium on securities purchased for investment	5,990 00	
Amount paid the City Treasurer of Cambridge to meet the amount of water bonds which matured July 1, 1881, viz.:	50,000 00	
		57,069 67
Leaving the amount of the fund, Nov. 30, 1881, all securities at par		$427,630 31

The following is a list of the securities belonging to the fund: —

Cambridge Low-land Loan, six per cent coupon bonds, maturing July 1, 1883,	$1,000 00	
Cambridge Water Loan, six per cent coupon bonds, maturing Aug. 1, 1883,	1,400 00	
Cambridge City Loan, six per cent coupon bonds, maturing April 1, 1884 .	3,000 00	
Cambridge Water Loan, six per cent coupon bonds, maturing April 1, 1887 .	6,000 00	
Cambridge Water Loan, six per cent coupon bonds, maturing April 1, 1888 .	25,000 00	
Cambridge Water Loan, six per cent coupon bonds, maturing May 1, 1889 .	6,000 00	
Cambridge Water Loan, six per cent coupon bonds, maturing July 1, 1890 .	31,000 00	
Cambridge Water Loan, six per cent coupon bonds, maturing May 1, 1891 .	26,000 00	
Cambridge Water Loan, six per cent coupon bonds, maturing July 1, 1892 .	1,000 00	
Cambridge Water Loan, six per cent coupon bonds, maturing April 1, 1895 .	37,000 00	
Cambridge Water Loan, six per cent coupon bonds, maturing July 1, 1896 .	46,000 00	
Cambridge Water Loan, six per cent coupon bonds, maturing July 1, 1897 .	16,000 00	
Cambridge Water Loan, five per cent registered bonds, maturing July 1, 1898	12,500 00	
		$211,900 00
City of Providence five per cent registered bonds, maturing Sept. 1, 1882 . . .	$42,000 00	
State of Connecticut six per cent coupon bonds, maturing Jan. 1, 1883 . . .	1,000 00	
City of Providence five per cent registered bonds, maturing Sept. 1, 1883 . . .	5,000 00	
City of Charlestown five per cent coupon bonds, maturing Oct. 1, 1883 . . .	1,000 00	
City of Boston five per cent coupon bonds, maturing April 1, 1885	8,000 00	
City of Boston five per cent coupon bonds, maturing Jan. 1, 1886	1,000 00	
City of Burlington, Vt., six per cent coupon bonds, maturing July 1, 1886 .	500 00	
Amounts carried forward	$58,500 00	$211,900 00

Amounts brought forward	$58,500 00	$211,900 00
City of New Bedford four per cent coupon bonds, maturing Oct. 1, 1889 .	8,000 00	
City of Gloucester four and one half per cent coupon bonds, maturing July 1, 1890	5,000 00	
City of Fall River four per cent coupon bonds, maturing May 11, 1895 . .	9,000 00	
City of Fall River five per cent coupon bonds, maturing May 1, 1898 . . .	2,000 00	
Town of Arlington five per cent coupon bonds, maturing July 1, 1898	30,000 00	
Town of Pawtucket, R. I., five per cent coupon bonds, maturing April 1, 1899,	25,000 00	
City of Providence four and one half per cent coupon bonds, maturing June 1, 1899	3,000 00	
City of Boston four per cent registered bonds, maturing April 1, 1900 . . .	4,000 00	
City of Fall River four cent coupon bonds, maturing Aug. 1, 1900 . . .	13,000 00	
United States four per cent coupon bonds, maturing after July 1, 1907	37,500 00	
Town of Norwalk, Conn., four per cent coupon bonds, maturing at pleasure of town after Jan. 1, 1891	20,000 00	
		215,000 00
Cash balance in First National Bank, Cambridge		730 31
		$427,630 31

RECAPITULATION.

Cambridge Water bonds, bearing six per cent interest	$195,400 00
Cambridge Water bonds, bearing five per interest	12,500 00
Cambridge Low-land Loan bonds, bearing six per cent interest	1,000 00
Cambridge City Loan bonds, bearing six per cent interest	3,000 00
State, city, and town bonds, bearing six per cent interest	1,500 00
State, city, and town bonds, bearing five per cent interest	114,000 00
State, city, and town bonds, bearing four and one half per cent interest . . .	8,000 00
Amount carried forward	$335,400 00

Amount brought forward	$335,400 00	
State, city, and town bonds, bearing four per cent interest	54,000 00	
United States bonds, bearing four per cent interest	37,500 00	
Cash balance in First National Bank, Cambridge	730 31	
		$427,630 31

The bonded water debt, which the foregoing fund is expected to pay, matures as follows, viz. : —

Aug. 1, 1883	$55,000 00
July 2, 1886	100,000 00
April 1, 1887	150,000 00
April 1, 1888	175,000 00
May 1, 1889	112,000 00
July 1, 1890	60,000 00
May 1, 1891	50,000 00
July 1, 1892	335,000 00
April 1, 1894	150,000 00
April 1, 1895	160,000 00
July 1, 1896	103,000 00
July 1, 1897	16,000 00
July 1, 1898	12,500 00
	$1,478,500 00

During the year, $50,000 of the funded Water Loan bonds have matured and been paid, and the fund has increased by $13,061.83.

JAMES A. FOX,
CHARLES WALKER,
WM. W. DALLINGER,
} *Trustees of the Sinking Fund of the Cambridge Water Works.*

REPORT

OF THE

JOINT STANDING COMMITTEE ON PUBLIC PROPERTY.

In presenting a summary of its doings, your committee necessarily exhibits a larger aggregate of expenditure than has been made under its appropriations for several years. The demand for increased outlays in all the divisions of its work was apparent at the beginning of the year. Improvements begun or projected during the year 1880 rendered it necessary that the various appropriations should be increased considerably beyond the sums fixed in any of the years since the adoption of the present financial policy. The rigid economy to which successive city councils had felt obliged to adhere in all departments for four years previous had compelled the postponement of many needed improvements and repairs in the city buildings, which could not longer be delayed without injury to the property. While the committee has recognized and sought to meet all such exigencies as have come to its notice, the utmost prudence has nevertheless been exercised, and only such work has been done as could not be dispensed with consistently with the public welfare.

During the financial year ending Nov. 30, 1881, there have been approved by this committee, bills aggregating as follows:

Appropriations.

Care and repairs surrendered estates		$530 77
Incidental expenses:		
Care and repairs city buildings	$6,789 23	
Care of clocks, and ringing bells	275 53	
Burial ground, Ward One, fence	30 34	
Amounts carried forward	$7,095 10	$530 77

Amounts brought forward	$7,095 10	$530 77
Fences at bathing places	63 45	
Repairing city scales	32 01	
		7,190 56
Shade trees and public grounds		25 59
Police department, repairs at stations		168 22
Care and repairs of school-houses		30,075 57
Fire department:		
Repairs, Engine House No. 1	$73 04	
Repairs, Engine House No. 2	662 47	
Repairs, Engine House No. 3	109 36	
Repairs, Engine House No. 4	323 80	
Repairs, Engine House No. 5	9 00	
Repairs on Chemical No. 1	100 05	
		1,510 92
		$39,501 63

Included in the above are the amounts approved by the previous committee in November and December, 1880, all being included in this financial year.

In the management of the large expenditures within its control, your committee could give nothing less than the strictest personal attention and vigilance, to secure to the city the proper equivalent for the sums expended. It is believed that all these outlays have been judiciously made, and for the permanent benefit of the city.

Following is an account of the various divisions of the work of the committee: —

School-Houses and Public Buildings.

The construction of a primary school-house in Ward Three was projected by the City Council of 1880, and a lot of land on Charles Street was purchased, the cost of which was included in the expenses of that year. Your committee found the duty of carrying forward this work to its completion awaiting it at the beginning of the year. It was accordingly immediately opened to competition; and after a careful consideration of the matter, the contract was awarded to Mr. John Quinn, as the most satisfactory bidder. The building was finished and accepted by the committee, April 21, 1881.

The entire cost of this school-house and land was as follows:

Lot of land, 10,000 feet	$1,500 00
School-house complete	7,569 48
Total	$9,069 48

The building is highly satisfactory to your committee, and may be regarded as a model for future buildings for this grade of schools.

The necessity of providing for this new school-house, and for improvements and repairs long anticipated, rendered necessary a large increase of this appropriation over the amounts heretofore provided.

The amount appropriated was		$29,000 00
Amount transferred from		51 18
		$28,948 82
Amount transferred to		1,126 75
		$30,075 57
Amount expended:		
School-house on Charles Street	$7,569 48	
" " " " furnishing	583 89	
Care and repair school-houses	21,922 20	
Total		$30,075 57

It appears from the foregoing that there has been an increase in the cost of this department of the sum of $3,363.94, over the expenditures of 1880. The amount charged to the appropriation for care and repairs of school-houses, for the past two years, may be analyzed as follows: —

	1880.	1881.
Blackboards	$137 76	$50 17
Brushes, brooms, etc.	152 45	121 60
Clocks and bells	106 70	34 10
Expressage and teaming	37 78	35 10
Fuel	5,550 22	7,003 54
Furniture and repairs	109 05	481 21
Gas	137 81	266 92
Gravel, grading, and paving	139 15	23 17
Hardware and tools	116 94	244 46
Amounts carried forward	$6,487 86	$8,260 27

Amounts brought forward	$6,487 86	$8,260 27
Janitors	7,642 85	8,032 33
Repairs	3,219 40	3,830 17
Supplies, miscellaneous	230 38	645 41
Water rates	1,152 30	544 48
Weighing coal	42 84	42 80
	$18,775 63	$21,355 46
New school-houses	7,936 00	7,569 48
" " furnishing		586 79
Fire-escapes		563 84
	$26,711 63	$30,075 57

The cost of the care and repairs of school-houses, exclusive of new buildings and permanent improvements, is shown by the above tables to have been

In 1881	$21,355 46
In 1880	18,775 63
Increase of expenses in 1881	$2,579 83

This excess may be in part accounted for as follows : —

Care of buildings in annexed district	$323 59
Care of new building in Ward Three	261 35
Furnace work in Ward Three in 1880, paid in 1881	472 67
Increased cost of fuel in 1881 over 1880	1,281 97
	$2,339 58

The actual increase of running expenses under this appropriation for all the school-houses, exclusive of those in the annexed district, and the new building in Ward Three, is $240.25. Had the prices of labor and materials been without advance over those of the preceding year, your committee would have been able to exhibit a considerable reduction of expenses in this department.

The occurrence of a slight fire in one of the principal school-houses, in January last, brought directly to the notice of the committee the necessity of providing better safeguards against danger from this cause. Every public building was carefully inspected, and all possible effort made in this direction. Suitable fire-escapes were provided for the larger school-houses, and for the Central Square building.

Endeavors have also been made to perfect, as far as possible, the sanitary arrangements of all the public buildings.

Repairs long needed have been made in all the different engine houses, the cost of which is given in the tables in another part of this report.

Public Lands.

There has been no change in this property since the year 1880. No especial demand has been shown for city lands, and the committee has not deemed it expedient to force a sale at low prices.

Surrendered Estates.

A large portion of these estates was disposed of in the year 1880, and nearly all the rentable property has since been sold by the present committee. As only a small part of the estates remained in possession of the city at the close of the last year, it was deemed advisable to dispense with the services of a collecting agent, and the rents of the buildings still unsold have since been received directly into the city treasury.

The amount of sales is as follows: —

Cash received	$4,525 00
Mortgages at six per cent	15,624 00
Total	$20,179 00

Several of these estates sold in 1880 came back upon the city, and have been resold by this committee. From the auditor's books it appears that the whole amount of such sales in 1880 and 1881 is $44,249. The taxes on this sum, at $16 per $1,000, most of which were assessable May 1, 1881, are $707.98.

A comparison of the schedule hereinafter given with that appended to the report of the last year will show the estates sold by your committee in the year 1881: —

Amount received for rents to Nov. 30, 1881	$1,098 49
Amount expended	530 77
Excess of receipts over expenses	$567 72

Amount appropriated for care and repair of surrendered estates	$800 00
Amount expended	530 77
Balance unexpended	$261 23

No comparison of these figures can be made with those of preceding years, so much of the property having been disposed of.

All the unsettled claims for estates surrendered on account of low-land filling have been adjusted. The estate surrendered by Benjamin F. Davies in the Miller's River district has been conveyed to him under the terms of a settlement made by the Committee on Claims, to which the matter was specially referred by the City Council. The estates unsold are principally lands, the few tenements remaining being of doubtful value, and productive of but little income.

Mill Pond Property.

By an adjustment of a long-pending claim against E. W. Cutter for filling done under the statute known as the "Nuisance Act," made in December, 1880, the city came into possession of all the property owned by said Cutter, lying upon River Street, Putnam Avenue, and Western Avenue, and known as the "Mill Pond Property." The amount paid therefor in accordance with the agreement was $10,000. The estate consists of the old mill and its basin on River Street, and an irregular-shaped piece of land north of Putnam Avenue, between River Street and Western Avenue; the total area being 319,000 square feet, or $7\frac{32}{100}$ acres. The mill is of little value except for storage purposes, being considerably out of repair. The land is in an eligible locality, and your committee believes that it will ultimately be largely renumerative.

Unredeemed Tax-Title Estates.

On the 14th of February your committee took legal possession of two estates of this character, and also of eleven others on the 4th of May following. One of these estates has since been redeemed, and another is likely to be adjusted in the same manner.

One of the estates so taken has recently been let, and a small income will be derived therefrom during the coming year. No further action has been taken in reference to the remainder of this unredeemed property.

Janitors of School-Houses and Public Buildings.

It is necessary to say but little in regard to these officers. The persons in charge of the city buildings, and constantly employed therein, have the especial confidence and commendation of the committee. With the desire to act at all times in harmony with the School Committee with reference to the janitors of schools, your committee has repeatedly conferred with the superintendent, and under his direction a series of rules for the guidance of school janitors has been prepared and approved by this committee. A monthly report is also made by each school teacher to the superintendent of the manner in which the janitor's work is done, and these reports are laid before this committee. It is believed that the present employés are performing acceptable service.

THE FOLLOWING IS A SCHEDULE OF PROPERTY

Owned by the city at the close of the year 1881, all of which is under the charge of this committee, except such as is specially noted.

Almshouse Building.

Foot of Tannery Street, Ward Five, with $14\frac{242}{1000}$ acres of land in Cambridge, $22\frac{5}{1000}$ acres of land in Somerville, and $\frac{1}{10}$ acre in Arlington. Total area, $36\frac{1}{3}$ acres. Also stone ledge located on almshouse land. (In charge of Board of Overseers of the Poor.)

Cemeteries.

Cambridge Cemetery. Foot of Coolidge Avenue, containing $40\frac{8129}{10000}$ acres of land. (In charge of Board of Commissioners of Cambridge Cemetery. Included in their report.)

Burial Ground. Garden Street, junction of North Avenue, containing 85,858 square feet of land.

Commons and Public Squares.

Cambridge Common. Garden Street, North Avenue, and Waterhouse Street. Area 370,785 square feet.

Public Square. Between Waterhouse Street and North Avenue. Area 13,180$\frac{7}{10}$ square feet.

Arsenal Square. Garden and Chauncy Streets and Concord Avenue. Area 3,189 square feet.

Public Square. Between Waterhouse Street and Garden Street. Contents 363 square feet.

Public Square. Between Holmes Place and Cambridge Street. Contents 20,956 square feet.

Public Square. North Avenue, corner of Kirkland Street, on south corner. Contents 23,074 square feet.

Public Square. North Avenue, corner of Kirkland Street, on north corner. Contents 33,357 square feet.

Broadway Park. Broadway, corner of Norfolk Street. Contents 107,181 square feet.

Fort Washington. Waverley Street. Contents 42,123 square feet.

Common. Junction of Pleasant and River Streets. Contents 1,569 square feet.

Hastings Square. Brookline, Chestnut, and Henry Streets. Area 29,999 square feet.

Dana Square. Lake, Magazine, Lawrence, and Niagara Streets. Area 33,531 square feet.

Winthrop Square. Brighton, Winthrop, and Mount Auburn Streets. Area 10,236 square feet.

Tudor Park. Between Fresh Pond Drive and Watertown Branch Railroad, containing 53,032$\frac{2}{10}$ square feet.

City Lands.

Lot on Franklin, Auburn, and Sydney Streets, containing 79,920 square feet.

Lot on Auburn, Pilgrim, and Sydney Streets, containing 85,160 square feet, with house and shed thereon, owned by Water Works. (Leased to Cambridge Water Works.)

Lot on Sydney Street, east side, near Auburn Street, containing 26,172 square feet.

Lot on Cambridge, corner Portland Street, containing 111,697 square feet.

Lot, junction of Arrow and Main Streets, containing 872 square feet.

Lot, junction of Hampshire Street and Broadway, containing 614 square feet.

Gravel Pits.

Gravel Pit, on Concord Avenue, containing 397,417$\frac{7}{10}$ square feet. (In charge of Committee on Roads and Bridges.)

Gravel Pit in Watertown, containing 109,464$\frac{9}{10}$ square feet. (In charge of Committee on Roads and Bridges.) The gravel only is owned by the city.

City Buildings.

Ward One Building, Brattle Square, and land, 16,153 square feet.

Central Square Building, junction Western Avenue and Green Street, and 13,028 square feet of land.

City Hall, Main Street, corner Pleasant Street, and 10,181 square feet of land.

City Stables, Norfolk, Hampshire, and Tremont Streets, and 72,661 square feet of land. (In charge of Committee on Roads and Bridges.)

Police Station, Norfolk Street, on City Stable lot.

Engine Houses.

House No. 1, Eliot Square, corner Mount Auburn Street, included with Ward One Building.

House No. 2, Main Street, near Winsor, and land, 3,150 square feet.

House No. 3, Gore and Fourth Streets, and land, 4,220 square feet.

House No. 4, North Avenue, near corner Russell Street, and land, 6,315 square feet.

House No. 5, Hampshire Street, corner Inman, and land, 6,000 square feet.

House, Old, junction Western Avenue and River Street, and land, 1,943½ square feet. (Leased as a carpenter's shop.)

House, Hook and Ladder No. 2, Cambridge, corner of Portland Street, land included in city lands.

School-Houses.

Allston, Boardman Street, 15,193 feet of land.

Agassiz, Oxford Street, corner Sacramento Street, 19,689 feet of land.

Boardman, Winsor Street, corner School Street, 10,018 feet of land.

Bridge, Pioneer Street, Lower Port, 4,646 feet of land.

Corlett, Holworthy Street, and 10,000 feet of land.

Cushing, Cushing Street, nearly opposite Locust Street, 14,788 feet of land.

Dunster, Concord Avenue, near Sparks Street, and 10,000 feet of land.

Dana, Centre Street, and 14,317 feet of land.

Felton, Amory Street, corner Summer Street, and 15,090 feet of land.

Gore, Gore Street, between Third and Fourth Streets, and 9,900 feet of land.

Gannett, Columbia Street, between Lincoln and Cambridge Streets, and 8,802 7/10 feet of land; also, school-house lot adjoining, containing 18,870 feet.

Harvard (Grammar), Broadway, corner Inman Street, and 20,494 feet of land.

Harvard (Primary), Harvard Street, near Prospect Street, and 10,050 feet of land.

High School, Fayette Street, Antrim Street, and Broadway, and 37,828 feet of land.

Holmes, Hilliard Street, and 11,182 feet of land.

Lassell, Charles Street, near Sixth, and 10,000 square feet of land.

Mason, Front Street, corner Jennings Street, and 10,000 feet of land.

Otis, Otis Street, between Fifth and Sixth Streets, and 8,270½ feet of land.

Putnam, Otis Street, corner Fourth Street, and 10,000 feet of land.

Quincy, Mason Street, corner James Street, and 8,469 $\frac{3}{10}$ feet of land.

Reed, Reed Street, Ward Five, and 12,000 feet of land.

Riverside, Putnam Avenue, Ward One, and 11,198 feet of land.

Sargent, Broadway, corner Winsor Street, and 9,995 feet of land.

Shepard, North Avenue, near Russell Street, and 14,755 feet of land.

Thorndike, Thorndike Street, corner Sixth Street, and 10,027 feet of land.

Willard, Lake, Lawrence, and Niagara Streets, and 20,079 feet of land.

Webster, Upton Street, and 25,839 feet of land.

Wyman, Spruce Street, corner Groveland Street, and 14,346 $\frac{8}{10}$ feet of land.

Washington, Brattle Street, corner Farwell Place, and 14,951 $\frac{1}{2}$ feet of land.

Surrendered Estates.

These estates have been surrendered to the city under the provisions of the statutes relating to low-land filling.

This list gives by whom surrendered, and location of property.

CAMBRIDGE STREET DISTRICT.

Horigan, Jeremiah. Warren Street. Two houses and 6,489 feet of land.

Langley, Samuel. Hunting and Harding Streets. 1,676 feet of land on Hunting Street.

Madden, D. & H. A. Willow and Harding Streets. House and 6,063 feet of land.

Nourse, Susan M. Porter and Jefferson Streets. Lot of land, 7,756 feet, Porter Street; lot of land, 11,202 feet, Porter and Jefferson Streets.

Rafferty, B. Cambridge and Jefferson Streets. Old building, and 24,934 feet of land.

MILLER'S RIVER DISTRICT.

Callahan, Mary. Rear of Winter Street. Lot of land containing 4,004 square feet.

Dale, Thomas J. Rear of Winter Street. Three old buildings and 5,220 feet of land.

Moulton, H. & C. W. H. Rear of Gore Street. Lot of land containing 7,800 square feet.

Tibbetts, Israel. Bridge Street. Lot of land containing 3,765 feet.

COWPERTHWAITE STREET DISTRICT.

Crane, Ann, Heirs of. Grant Street and De Wolf Street. Lot of land containing 16,353 square feet.

Kneeland, Henry. Grant Street. Lot of land, 4,000 feet, on Grant Street.

Winthrop, William, Heirs of. Athens Place. Lot of land, west side, 6,750 feet; lot of land, east side, 20,360 feet.

WASHINGTON STREET DISTRICT, SOUTH DOCK AND SOUTH CANAL.

Bent Heirs. Dock and Sixth Streets; east lot containing 5,224 feet; west lot containing 5,959 feet; rear lot containing 32,060 feet.

Hunt, Fanny E. Harvard Street, north side, easterly of the estate of Bridget Manning; lot containing 6,966 feet.

FRANKLIN STREET DISTRICT.

Biggin, John. Franklin Street. Lot of land containing 3,004 square feet.

Chamberlain, N. & G. D. Green Street, near Vernon. Double house and about 4,000 feet of land.

Daily, Cornelius. Hancock Street, near Green. 3,467 feet of land.

Drinan, Maurice. Kinnaird Street. Lot of land, about 3,927 feet.

Halloran, Mrs. Mary. 249 Franklin Street. Lot of land, 3,084 feet.

Johnston, Thomas A. Green Street. Lot of land, 4,860½ feet.

Kelley & McKinnon. Howard Street. Two lots of land, 7,200 feet.

Lonergan, Michael. Howard Street. Lot of land, 3,600 feet.

Murdock, Heirs of Hannah S. Land as per their plan. Western Avenue, new street from Western Avenue to Hews Street, lots 1 to 45 inclusive, containing 52,059 square feet; Franklin Street, lots Nos. 13, 14, 15, containing 11,500 square feet; Kinnaird Street, lots 16 to 21 inclusive, containing 22,240 square feet; Jay and Kinnaird Streets, lot 27 and about one half of lot 26, contents 2,830 square feet. Total area, 88,629 square feet.

Murdock, Walter H. and Mary L. Land as per their plan. Magee, Hayes, and Grigg Streets. Lots 16 to 26 inclusive (about one half of latter lot); lots 29 to 45 inclusive, — in all 80,273 square feet.

Read, J. Stacey. Franklin Street. Lot of land containing 21,128 feet; lot of land containing 3,833½ feet. Kinnaird Street, lot of land containing 17,646 feet. Howard and Kinnaird Streets, lot of land containing 8,174 feet. Total, 50,781½ feet.

Thresher, J. M. Jay Street, westerly side, lots 28 to 37 inclusive, containing 38,313 square feet. Howard and Kinnaird Streets, easterly side, lots 38 to 46 inclusive, 32,454 square feet; westerly side Howard and southerly side Kinnaird Street, lots 58 to 63 inclusive, 20,383 square feet; two corner lots on westerly side of Grigg Street, as per new plan, near Western Avenue, 29,935 square feet. Total, 121,086 square feet.

MILL POND PROPERTY.

Old Mill. River Street, near Brighton Bridge and upper and lower basins on River Street, Putnam and Western Avenues, comprising an area of 319,000 square feet, or $7\frac{32}{100}$ acres of land.

WHARVES AND LANDINGS.

Public Landing, foot of Bath Street, area unknown. *Public Landing*, south of Mount Auburn Street, area unknown. Each has a frontage of 30 feet on the river.

City Wharf, Main Street, opposite Harvard Street, 13,680 square feet. Also, 162,379 feet of flats opposite said wharf, not appraised.

WATER-WORKS PROPERTY.

Old Engine-House Lot, foot of Lake-view Avenue, about 33,568 feet of land.

New Engine House, opposite foot of Lexington Avenue, and 90,414 feet of land.

Fresh Pond, lands bordering on, area unknown.

Little Pond, lands bordering on, area unknown.

Reservoir, Reservoir Street, corner High Street, and 86,920 feet of land. All the Water Works property is in charge of the Cambridge Water Board, and no part thereof is included in any appraisals made by this committee.

Recapitulation of Areas.

Kind of property.	Square feet.	Acres.
Almshouse lands	1,583,289.4	36.347
Cambridge Cemetery	1,778,511.24	40.829
Burial Ground, Ward One	85,858	
Commons and Public Squares	742,575.9	
City Lands (salable)	304,435	
City Gravel Pit Land in Belmont	397,417.7	9.125
City Gravel Pit Land in Watertown	109,464.9	2.51
Occupied by City Buildings	112,023	
Occupied by School-Houses	402,798.8	
Occupied by Engine Houses	21,628.5	
Surrrendered estates, lands:—		
	Square feet.	
Cambridge Street District	58,120	
Miller's River District	20,789	
Cowperthwaite Street District	47,463	
Washington Street District	50,209	
Franklin Street District	373,932	
Total in all the districts	550,513	
Mill Pond Property	319,000	7.32
City Wharf Land	13,680	
City Flats, opposite City Wharf	162,379	
Lands occupied by Cambridge Water Works, exclusive of lands bordering on Fresh and Little Ponds	210,902	
Total	6,802,476.44	156.11

Schedule

Of salable city lands, included elsewhere in this report, with their appraisal, as made by the Committee on Public Property : —

Lot on Franklin, Auburn, and Sydney Streets, 79,920 feet .	$19,800 00
Lot on Auburn, Pilgrim, and Sydney Streets, 79,610 feet .	17,032 09
Lot on Sydney Street, east side, near Auburn Street, 26,172 feet	3,925 80
Lot on Cambridge, corner Portland Street, 111,697 feet . .	39,093 95
Flats opposite City Wharf, Lower Port, 162,379 feet (not appraised).	
Mill Pond Property	10,000 00
Total, as appraised	$89,851 75

Below is given a recent appraisal in detail of all the property mentioned in the foregoing list, except such as is in charge of the Cambridge Water Board, the aggregates being as follows : —

City Buildings, Land, and Furniture	$262,347 50
School-Houses, Land, and Furniture	594,673 21
Salable City Land	89,851 75
Surrendered Estates	132,268 20
Almshouse and Land	45,000 00
Wharf at Lower Port	7,000 00
Gravel Pit, in Cambridge	4,000 00
Gravel Pit, in Watertown	13,587 30
Personal property used in connection with Public Squares, including trees on hand	600 00
Total	$1,149,327 96

Respectfully submitted,

E. T. NICHOLS,
MICHAEL CORCORAN,
J. M. HILTON,
ALBERT NORRIS,
JOHN CLARY,
} *Committee on Public Property.*

ANNUAL REPORT

OF

THE BOARD OF HEALTH.

DECEMBER 31, 1881.

To the Honorable City Council: —

THIS Board submits herewith a report of the receipts and expenditures of its department during the year ending Nov. 30, 1881: —

Amount appropriated	$2,000 00
Less amount transferred	299 90
Balance	$1,700 10

Expenditures.

Analysis of water	$65 00	
Burying bedding	2 00	
Car tickets	25 00	
Directory	2 50	
Disinfectants	30 76	
Expenses in small-pox case	164 32	
Expressage	2 05	
Hand stamp	5 00	
Printing and stationery	55 09	
Postage stamps and postal cards	15 50	
Record book	1 00	
Serving notices	5 88	
Salary of health officer	1,000 00	
Salary of clerk	150 00	
Vaccinations	173 00	
Total		1 697 10
Balance unexpended		$3 00

By direction of the Board of Health,

JOHN McDUFFIE, *Clerk.*

To the City Council of the City of Cambridge: —

In accordance with the statutes creating boards of health, we herewith submit our usual annual report for the year ending Dec. 31, 1881.

The greater part of the work of the year has been of the usual kind done by sanitary boards, and nothing of very marked or peculiar interest has occurred; still, some of it we deem of sufficient importance, as matters of information and instruction, to lay before you in detail.

The following shows the number and nature of nuisances abated: —

Privy vaults and cesspools cleaned	115
Vaults made and repaired	12
Defective drainage	29
Filthy yards	6
Filthy houses and rooms	3
Filthy stables	4
Swill thrown about premises	13
Stagnant water in cellars	11
Stagnant water on vacant land	6
Cow stables	4
Pigs, kept	3
Total	206

During the year, six parties have been fined in the Police Court for violating city ordinances relating to health.

Five places of dwelling have been ordered to be vacated unless the orders of the Board were complied with, within a specified time; this having been done in four cases, the order of the Board was executed in only the remaining one.

The principal item of nuisances is, as usual, filthy and offensive privy vaults. Although these privy vaults have nearly disappeared from some parts of the city, and more modern and much better methods of disposing of such substances as they contain have taken their place, other parts, and some of them the most thickly settled, retain almost wholly, for this purpose, outside privies. Many of these vaults were built years ago, and of wood, in consequence of which not only the material of which they are constructed, but the ground about

them, from long and constant saturation by their liquid contents, has become exceedingly offensive; and many of them — no doubt owing to the way in which large lots of land have been cut up into smaller ones, and to the many changes in ownership — are most unfortunately situated in relation to neighboring estates, some being on the line of the adjoining territory, others close by the back, and in some cases the front door, while others are immediately under the windows, delivering their disgusting odor directly into the house.

The regulation of this Board in relation to the matter, adopted in 1878, is as follows: —

SECT. 14. All privy vaults hereafter constructed shall be made of brick and cement, and contain at least eighty cubic feet, and the inside of the same shall be at least two feet distant from the line of every adjoining lot, and at the same distance from every street, lane, alley, court, square, or public place, or public or private passageway; and they shall be so constructed as to be conveniently approached, opened, and cleaned. Every vault or cesspool shall be made tight, so that the contents thereof cannot escape therefrom, except as is provided in Sect. 17. All preparations for cleaning a cesspool, vault, or privy shall be made by the person liable to the penalty prescribed in Sect. 13; and in case of neglect to make such preparations, it shall be made by the city, and the expense thereof be charged to such person.

According to this regulation, this Board, in order to abate a nuisance caused by one of these old vaults, must first adjudge it to be such, and dangerous to the public health. Of course this can only be done after getting evidence in relation to the matter; and in a large majority of cases, parties prefer to suffer the annoyance until it becomes unbearable, rather than to give such evidence against their neighbors, and it is therefore only occasionally that one can be got rid of in this way. Under these circumstances, we sincerely hope that real-estate owners will avail themselves of the regulations in relation to house drainage (to be spoken of hereafter), lately adopted by this Board. We believe that by so doing they will not only increase the value of their estates, but that it is also advisable as a matter of economy, inasmuch as the expense of cleaning vaults would in a short time amount to more than the cost of such drain connections as are described in these regulations. Some time late in February, it was reported to this Board that some

of the liquid from the muck heaps connected with the hog-slaughtering establishment of Niles Brothers, near Concord Avenue, was finding its way into Fresh Pond. The muck heaps are piles of bog mud taken from a neighboring swamp and deposited on the side of a hill near its top, north of the buildings occupied by this concern; the two (building and muck heaps) are connected by an iron pipe, and the soup, as it is called — being a liquid filth caused by some part of the slaughtering — is pumped by means of steam through this pipe and distributed on these piles of mud, the mud being used as an absorbent. The object of this operation is to convert the whole into a fertilizer. There were about three thousand cords of this on the hill at the time referred to, most of which was or had been filled to saturation with this liquid. The Board on inspection found that two streams of dark-colored liquid were running from these piles, one going towards Wellington Brook, the other running down the hill and over the conduit leading from the brook and Little Pond to Fresh Pond; the first stream, or the one leading towards Wellington Brook, could be traced by the stained snow for quite a distance from its origin. Some of this liquid was taken from one of these streams near the heap and analyzed, with the following result: —

FEBRUARY 19, 1881.

Free Ammonia.	Albuminoid Ammonia.	Chlorine.	Residue.		Total.	Hardness.
			Fixed.	Volatile.		
0.1240	0.0678	0.70	3.10	2.00	5.10	½

Note. — Odor very foul, but not as bad as on Feb. 12.

How much of this liquid found its way into our water supply it is impossible to say, as the Water Board caused the gate admitting water from Wellington Brook to be shut, so that little or none got in in this way; and as the stream going over the conduit ran for a few hours only, and was quite small, it is probable that but a very small quantity, if any, actually reached the pond. Certainly no bad result came from it, and from the fact that all this soup before being pumped had been submitted

to a boiling heat, little if any was to be apprehended. At the time this occurred, the muck heaps were saturated with this liquid, the surface of the ground was frozen hard and most of it covered with ice, and there had been a very severe rain-storm for a number of days; a combination of circumstances not likely to occur again. We at once ordered Niles Brothers to cease pumping this material, and to dispose of it in some other way. This order has, we believe, been strictly complied with; and this soup has since been carried away in iron tanks on the rail-road. In the spring a hearing was had in relation to these muck heaps, the result of which was that the proprietors were ordered to have them removed before the 1st of November, 1881. As the stuff did not meet with ready sale, on the owners' assurance that anything that the Board might order would be done to prevent these heaps contaminating our water supply, they were given more time for their removal, but were ordered to dig trenches and throw up embankments where there was any probability of liquid running or soaking out of them. This order has been complied with, and the Board feel sure that there is no danger to be apprehended from this source. We think it very unfortunate that an establishment of this character should be so near the shores of Fresh Pond, for the reason that, from the very nature of the business, it must be constantly more or less a menace to the purity of our water supply, no matter how well, in a sanitary point of view, it may be conducted; still we do not consider the danger of such a nature as to require other regulations than those by which it is already governed, — that is, the soup to be carried away in tanks, the place to be kept clean, and business generally to be carried on in as neat a manner as possible. So far, the proprietors have cheerfully complied with such orders and suggestions as have been given to them by this Board.

During the last year there were indications that we might be visited with an epidemic of small-pox, it having occurred in New York, Philadelphia, and many other places, in some of them very extensively. Although no active measures were taken in relation to such a visitation until spring, the best means of preventing such an occurrence, and meeting it if it came, were freely discussed early in the year. The first case

appeared in May. This was the case of a girl working in a hair and feather establishment in Boston, and living on Cambridge Street. It was promptly reported by Dr. Coburn, and the patient was at once removed to a building near the almshouse, a nurse procured, and all other necessary arrangements made to insure her proper care. The house from which she was taken was thoroughly disinfected, and all the inmates vaccinated; so far as known, no other case came from this, — certainly none occurred in Cambridge. This fortunate result was hardly to be expected, as the house from which the case was taken was situated in a thickly populated district, and one in which there are more persons unprotected by vaccination than in most other parts of the city. About this time eight thousand circulars, calling the attention of our citizens to the law relating to vaccination, were circulated; these also gave notice that a physician would be in attendance at the Central Square building, two afternoons in the week, to vaccinate those unable to pay for such service, and since then nearly six hundred have availed themselves of this privilege. This arrangement is still in operation. The Board feels sure that money paid for this work is well expended. In October another mild case of small-pox occurred on Hamilton Street; and as this patient could be well isolated at his own home, he was not removed, but every other precaution was taken to prevent contagion. No cases followed this until Dec. 3, when a case occurred at corner Harvard and Portland Streets, it being that of a woman who came from Prince Edward's Island a year ago, and who had never been vaccinated. One week before, she had been discharged from the Boston City Hospital, where she had been some weeks. Living in this woman's family were her two children, aged four and six, who had never been vaccinated, her husband, another man and wife, and two children, who also had never been vaccinated. The patient was removed to the hospital Thursday morning, the case having been reported Wednesday afternoon; and as this patient had reached the fourth day of eruption before removal, it was supposed that some of the other inmates of the house would take the disease, although they were all vaccinated as soon as the case was discovered. It was therefore thought advisable to keep them all in this

same house until time decided the matter; and as all of the parties were very poor, the Overseers of the Poor were consulted, and it was arranged that they should be supported here for three weeks. Fortunately all the vaccinations were successful, and so far no other case has occurred. We feel sure that to vaccination, though five days or more after the mother had decided symptoms of what proved to be the disease, should be given the credit of this fortunate result.

Our object in mentioning this fact is that every one may be induced to be vaccinated on learning of exposure to this contagion. The building used as a hospital for these patients is the one used for this purpose some years ago, it being a one-story building containing four rooms, two of these rooms having windows at two sides, the other two having windows only on one side; all have doors opening from the outside, and all of them have a fireplace or stove. Although the building is not the best, it can be well warmed, lighted, and fairly well ventilated; and four, or possibly five cases by putting two mild ones in one room, can be well accommodated here, but not more than that number. The indications now are that this will be all the building we shall require for this purpose during this epidemic; but if more room should be needed, we are of the opinion that a building suitable for the accommodation of such patients should be built, and that the most available place for such a hospital is the knoll northwest of the building at present used for this purpose.

Early in the summer the Board adopted the following regulations in relation to house drainage: —

By virtue of the authority given to Boards of Health by Chapter 133 of the Acts of the Legislature of 1877, and Chapter 185 of the Acts of 1881, the Board of Health of Cambridge hereby adopts the following regulations for the construction of house drainage: —

SECTION 1. On every street provided with a common sewer, the sewage from each building on said street shall be conducted into the common sewer.

MATERIALS.

SECT. 2. That portion of the house drain which is outside of the building and more than four feet from the foundation walls shall be constructed of iron pipe or vitrified drain pipe.

That portion of the house drain outside or under the building, and

within four feet of the foundation walls, together with the soil pipe, shall be constructed of cast iron with leaded joints. The waste pipes connected with the conductors from the roofs, and all other pipes inside the building or outside and within four feet of the foundation walls, shall be constructed of iron with leaded joints.

GRADES.

SECT. 3. The house drain and other pipes for the conveyance of sewage shall be laid with uniform grade and with a fall of not less than one inch in four feet, except in those cases where the City Engineer may permit otherwise.

TRAPS.

SECT. 4. The main house drain shall be provided with a trap which shall be located outside the house walls and beyond all house connections. All pipes connecting a water-closet with a soil pipe shall be trapped, each separately, and close to the connection with each water-closet. All waste pipes shall be trapped, each separately, and close to the connection with each bath, sink, bowl, or other fixture.

VENTILATION.

SECT. 5. All soil pipes shall be carried at their full size through the roof, and left open. A provision shall also be made for admitting air to the house drain on the house side of the main trap.

WORKMANSHIP.

SECT. 6. The joints in the vitrified pipe shall be carefully cemented, under and around the pipe, and the joints in the cast-iron pipe shall be run and calked with lead.

All changes in direction shall be made with curved pipes, and all connections shall be made with Y branch pipes. All joints and pipes shall be made air-tight. The whole work to be executed by skilful mechanics in a thorough and workmanlike manner, and satisfactory to the Board of Health.

PLANS.

SECT. 7. Before proceeding to construct any portion of the drainage system of a hotel, tenement, dwelling-house, or other building, the owner, builder, or person constructing the same shall file with the City Engineer a plan thereof, showing the whole drainage system, from its connection with the common sewer to its terminus in the house, together with the location and sizes of all branches, traps, ventilating pipes, and fixtures.

SECT. 8. These regulations shall apply to all hotels, tenements, dwelling-houses, or other buildings hereafter constructed in the city of Cambridge.

SECT. 9. All drains now built shall be reconstructed, whenever in the opinion of the Board of Health it may be necessary.

The city ordinances have since been amended in accordance with these regulations.

There are some misgivings on the part of some of our citizens as to whether such an arrangement as these regulations contemplate is practical, on account of the flatness of a large part of the city, and the consequent small amount of fall in many of our street sewers. We have fully considered this part of the matter, and are well satisfied that there will be no trouble from this cause, and that slight as the amount of fall is in some of the sewers, it is ample to carry off any additional amount of solid matter that will be discharged into them. Although these regulations refer only to buildings constructed since their adoption, and to such houses as the Board of Health may from time to time order to make such connections, still we would earnestly urge all house owners who now have other systems of drainage to adopt this one; believing, as we most thoroughly do, that if such a change is generally made, it will greatly improve the sanitary condition of our city, and largely reduce the chances of sewer gas entering houses where it may be adopted.

Early in the summer, complaint was made that the sewers in First Street and the lower ends of Otis and Thorndike Streets were broken, allowing them to become choked, and thus causing an escape of sewer gas into the large manufacturing establishments in this vicinity, some of them employing three or four hundred men. These sewers were examined by the health officer in connection with the City Engineer, and the last-named officer caused these sewers to be opened in a number of places in order that they might be examined. They were found to be in a very bad condition. The one in Otis Street was broken in a great many places, at some of which the sewage was allowed to escape, to enter it again at other places, at a point nearer its outlet. The sewer in First Street was in much the same condition, while that in Thorndike Street was completely filled up; and one of these manufacturing establishments, employing a large number of men, was obliged to discontinue the use of all its water-closets on this account. These sewers were all made of wood, and were laid on filled land; and as the filling was principally of oyster shells, it allowed the sewage to permeate quite a distance from

the sewer. The drainage from two of these factories, both of them complainants, was found to be seriously defective; and the escape of sewer gas into the building was probably due largely to this cause, although there is no doubt that some of it came directly from the sewer through the filling. The Board did not feel justified in ordering these drains repaired until there was something like a proper sewer into which to discharge them, and the attention of the Board of Aldermen was therefore called to the subject as one requiring immediate consideration. Late in the year, the matter not having been attended to, a second complaint was made from these parties, and another communication was sent to the Board of Aldermen, calling attention to the existing nuisance as a source of danger to the public health which must be abated, as the health of the inmates of these manufactories was more or less endangered by the constant exposure to sewer gas. A temporary relief was given by laying earthen pipes from the walls of the buildings to the old outlet of the sewer below First Street, with which the drain pipes of all the complaining firms have been connected. This is, however, only a temporary device, and in the opinion of this Board these sewers should be reconstructed, and connection made with the Bridge Street sewer.

The condition of Alewife Brook and that part of the Charles River basin within our limits remains about the same as last year, with of course some addition of filth in the latter. The former, owing to the large amount of rain during the summer and fall, is not quite as filthy and disgusting as it was during the dry season of last year. As your honorable body is aware, nothing has been done for the relief of either of these formidable nuisances. This Board has no recommendation to make in relation to them at present, preferring to await the report of the commission appointed by the Legislature last year, to investigate the general subject of drainage in this vicinity. It is more than probable that their report will be such as to require concert of action on the part of all the towns and cities in this vicinity; if this is the case, we shall probably have much to lay before the city in relation to this matter during the coming year.

During the month of October, four members of a family living on Inman Street were one day, soon after dinner, taken

suddenly and violently ill, with the most severe vomiting and purging, great pain in the bowels, and alarming depression of the vital powers. On investigation it was learned that these four members had eaten of a piece of corned beef, while other members of the family had not. The physicians in attendance were thoroughly satisfied that the eating of this meat was the cause of the sickness. This piece of beef was cooked on a Monday, some of it eaten, and no bad effects followed; it was put in an ice-chest where there was no ice, the weather being quite cool, and there it remained until Wednesday noon, when more of it was eaten, and these serious symptoms followed in about two hours, lasting in two of the worst cases until late in the evening. The following day, all of those poisoned had nearly recovered. The symptoms in two of these cases were so violent, and so much resembled cases of poisoning with some of the mineral poisons, that a small piece of the meat which was left after the meal, and some of the discharges from the bowels as well as some from the stomach, were submitted to Dr. Wood of Harvard College for examination. No traces of such poison were found. Last year two other cases came to our knowledge where whole families had been made sick in this way, but not quite so severely, after eating corned beef. In both of these cases the meat had been bought ready cooked. A few years ago a firm in a Western city sent out a large quantity of meat that was known by the name of pressed corn beef (cooked), and quite a number of cases of poisoning of the kind above related occurred from eating this meat. The Board of Health of Boston submitted some of it for chemical examination, with the same result as in our case.

Just what it is that produces these poisonous effects it is impossible to say, but we can reasonably draw this conclusion, which is at least of practical value: that meat, perhaps more particularly corned meat, if eaten when in a certain state of decomposition, or when undergoing decomposition under certain circumstances, may produce these results; as for instance, in the case described, the meat when first eaten was no doubt good, but the cooking had deprived it of a large part of the salt with which it was cured, and when put in the ice-chest without ice, decomposition occurred in such a way, or it had arrived at

such a stage, as to produce these results when the meat was eaten. Whether this explanation is correct or not, we hope that all who read this report will remember the practical fact it teaches: that corned meat that is tainted after cooking may produce a very distressing sickness in all who eat of it.

During the last few years, the business of keeping cows by persons engaged in dealing in milk has grown to be quite extensive in this city, and is carried on more or less in all parts of it, the number of animals kept in different stables varying from three or four to seventeen. A very few of these stables are proper and well adapted for this purpose, and are so situated as not to be a nuisance to the neighborhood where they are; but most of them are buildings constructed for other uses, and as a consequence are poorly arranged for such a business, some of them having no provision for ventilation or any proper place in which to store the manure, and nearly all of them are overcrowded.

During the last two years, a number of complaints have been received of a foul odor arising from this source. The subject of making some regulations for these cow stables is now under consideration by this Board.

We give with this report, as usual, a tabulated statement of the number of cases of diphtheria, scarlet fever, and typhoid fever that have occurred during the year, and it will be seen from this that the number of cases of diphtheria is slightly in excess of that reported last year, while the number of deaths from this cause has more than doubled, the greatest fatality being in the months of April and May; since that time the number of fatal cases has been steadily decreasing, and in the last three months there were only seven deaths from this cause, while in the same period of last year there were thirteen.

The number of cases of scarlet fever reported, like those of diphtheria, is slightly in excess of last year, there being 118, against 92 in 1880; notwithstanding this fact, the proportionate number of deaths from this cause has greatly decreased, there having occurred but a single one during the year. The great fatality of diphtheria and the very small fatality of scarlet fever during this year are only illustrations of the well-known fact

that different epidemics of this and other diseases differ greatly in this respect.

The number of cases of typhoid fever reported is nearly double the number reported last year. The first decided increase of the number of cases of this disease occurred in August, at about the same time it appeared as a mild epidemic in Boston and some other places in this vicinity. The number of cases increased monthly until November, when there was a slight decrease; while in December the number of cases reported was only five, about the usual number for this time in the year. A very large proportion of these cases was in Ward Two, north of Cambridge Street and west of the railroad crossing, in the adjoining part of East Cambridge, and in the district south of Mount Auburn Street and east of Brighton Street in Ward One; the few remaining cases were distributed in other parts of the city. The houses where these cases occurred in these two districts were all visited by the Health Officer, and their sanitary condition inspected. This examination showed that all of them, with three or four exceptions, were supplied with privy vaults, or that they were in the immediate vicinity of such vaults attached to other houses. As it is now a well-recognized fact that the great force of the contagion in this disease is in what passes from the bowels of such patients, it is probable that these vaults contributed in a large degree to the spread and the continuance of the disease. We would call the attention of all citizens to this fact, and when a case of this kind occurs would recommend that all such discharges be burned or otherwise destroyed, and that under no circumstances they be disposed of in a privy vault. This epidemic, fortunately, was not very fatal, there being only twenty-two deaths from this cause. Appended to this report is also a list of the deaths that have occurred during the year, with their causes.

D. H. THURSTON,
H. P. WALCOTT,
GEORGE F. PIPER,
Board of Health.

APPENDIX.

Causes of Death in 1881.

CLASSIFIED ACCORDING TO THE NOSOLOGY ADOPTED IN THE REGISTRATION REPORTS OF MASSACHUSETTS.

DISEASES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Scarlet Fever	....	....	....	....	....	....	....	....	....	....	1	....	1
Diphtheria	10	4	8	12	12	6	8	5	6	4	3	1	79
Measles	....	1	....	....	1	....	....	....	....	....	....	....	2
Croup	2	1	1	2	2	2	....	....	....	5	3	1	19
Whooping Cough	3	....	1	....	1	....	1	....	1	1	....	....	8
Typhoid Fever	1	....	....	....	....	2	2	....	2	6	6	3	22
Septicæmia	2	....	2	2	1	....	....	....	1	....	....	....	8
Erysipelas	....	2	1	....	1	....	1	....	....	....	1	....	6
Metria	....	....	....	....	....	....	....	....	1	....	2	1	4
Dysentery	1	....	....	....	....	....	....	4	1	....	....	....	6
Diarrhœa	....	....	1	....	....	....	....	2	....	4	....	....	7
Cholera Infantum	....	....	....	2	....	1	24	56	14	6	....	....	103
Cholera Morbus	....	....	....	....	....	....	2	2	1	1	....	....	6
Rheumatism	....	....	....	....	....	1	....	....	....	....	....	....	1
Cerebro-spinal Meningitis	1	....	1	1	1	1	....	....	1	....	....	....	6
Syphilis	....	....	....	....	....	....	....	1	....	....	....	....	1
Privation	....	....	....	....	....	....	....	....	....	1	....	....	1
Alcoholism	....	....	....	....	....	....	....	....	1	1	....	....	2
Dropsy and Anæmia	1	....	....	1	1	....	1	....	2	....	....	....	6
Cancer	2	4	....	1	6	4	5	5	3	5	3	4	42
Mortification	1	1	....	....	....	....	....	2	....	1	....	....	5
Scrofula	....	....	....	....	1	....	1	....	....	2	....	....	4
Phthisis	12	14	18	17	12	13	13	24	8	17	16	15	179
Hydrocephalus	....	1	....	1	1	....	2	2	1	1	....	2	11
Meningitis	1	1	4	4	2	2	9	1	3	8	4	4	43
Apoplexy	1	4	1	1	1	2	1	1	1	1	3	4	21
Paralysis	1	3	1	3	1	1	2	3	2	1	4	4	26
Tetanus	....	....	....	....	....	1	....	....	....	....	....	....	1
Convulsions	3	5	....	2	3	1	1	2	1	1	1	5	25
Brain Diseases	3	1	3	3	6	1	1	1	1	....	2	5	27
Pericarditis	....	....	....	1	....	....	....	....	....	....	....	....	1
Aneurism	....	....	....	....	....	....	....	1	....	....	....	....	1
Heart Diseases	10	2	5	4	7	4	2	6	3	3	4	7	57
Laryngitis	....	....	....	....	1	....	....	....	....	1	....	....	2
Bronchitis	5	7	3	2	3	1	1	2	....	....	....	3	27
Pleurisy	....	....	1	3	....	....	....	....	....	....	....	....	4
Pneumonia	17	16	9	11	5	1	3	2	9	5	8	22	108
Asthma	....	....	....	....	....	....	....	....	....	....	1	....	1
Lung Diseases	1	3	3	3	2	2	3	....	....	1	1	....	19
Gastritis	....	....	....	....	....	1	1	....	....	....	....	....	2
Enteritis	1	....	1	....	....	1	1	....	....	....	....	1	5
Peritonitis	2	....	1	....	1	....	2	1	....	1	2	1	11
Ulceration of Intestines	1	....	....	....	....	....	....	....	....	....	....	....	1
Hernia	....	....	....	....	....	....	....	....	1	....	....	1	2
Occlusion of Intestines	1	....	....	....	....	....	....	....	1	....	....	....	2
Stomach Disease	....	1	1	....	....	....	1	....	....	2	....	....	
Jaundice	....	1	....	1	....	....	....	....	1	2	2	1	8
Liver Disease	....	....	....	1	....	1	1	....	....	....	....	....	3
Spleen Disease	....	....	1	....	....	....	....	....	....	....	....	....	1
Nephritis	1	....	....	2	....	....	1	....	....	1	....	....	5

Causes of Death in 1881 — Continued.

Disease.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Bright's Disease	3	2	3	3	3	1	2	2	1	4	....	1	25
Diabetes	....	1	....	....	....	....	....	....	....	1	....	....	2
Cystitis	....	....	....	....	2	....	1	1	....	1	....	1	6
Pott's Disease	....	....	....	....	1	....	....	....	....	....	....	....	1
Disease of Uterus	....	....	....	....	....	....	....	1	....	....	....	....	1
Phlegmon	1	1	....	1	....	....	....	1	....	....	....	....	4
Eczema	....	1	....	....	....	....	....	....	....	....	....	....	1
Tumor	....	1	2	....	....	....	....	....	....	....	....	....	3
Still-born	2	2	4	2	4	4	4	2	3	....	3	3	33
Premature Birth and Infantile Debility	3	3	3	9	4	2	2	12	6	9	2	6	61
Cyanosis	....	....	....	....	....	1	....	....	2	1	....	....	4
Spina Bifida	....	....	....	....	1	....	....	....	....	....	....	....	1
Teething	....	....	....	....	....	....	1	....	....	....	....	....	1
Umbilical Hemorrhage	....	1	....	....	....	....	....	....	....	....	....	....	1
Hemorrhage	....	....	1	2	....	....	1	....	....	....	....	1	5
Necrosis	....	....	....	....	....	....	....	....	1	....	....	....	1
Child-birth	....	1	....	....	1	1	2	....	1	....	....	....	6
Puerperal Convulsions	....	1	....	....	....	....	....	....	....	....	....	....	1
Old Age	3	1	2	1	2	3	2	2	2	1	1	4	24
Atrophy and Debility	....	....	4	....	1	2	1	2	1	....	....	....	11
Fractures and Contusions	....	....	1	1	....	....	....	2	....	1	....	1	6
Burns and Scalds	....	....	1	....	....	....	....	1	2	....	1	....	5
Drowning	....	....	....	....	....	....	1	1	....	1	....	....	3
Suffocation	....	1	....	....	....	....	....	....	1	....	....	....	2
Other Violence	....	....	....	....	....	2	....	....	1	3	1	....	7
Suicide	1	....	2	1	1	....	....	....	....	....	....	....	5
Unknown	2	....	....	1	....	....	2	3	1	....	1	2	12
Total	99	88	90	101	92	65	109	153	88	104	76	104	1,169

Cases of Scarlet Fever, Diphtheria, and Typhoid Fever reported to the Board of Health for the Year 1881.

Name of Disease.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Scarlet Fever	9	19	17	12	5	6	5	4	6	9	12	13	117
Diphtheria	32	18	13	33	31	11	19	5	20	12	9	11	214
Typhoid Fever	1	1	..	..	2	..	3	8	19	37	26	5	102

REPORT

OF THE

CEMETERY COMMISSIONERS.

To the Honorable City Council:—

The Board of Commissioners of Cambridge Cemetery transmits herewith its annual report for the financial year ending Nov. 30, 1881.

In considering the result of its labors, and what it sought to accomplish during the past year in the improvement and embellishment of the cemetery grounds, it is not unnatural nor foreign to the purpose of this report that in the process of reviewal the mind should revert beyond the work of 1881, and to the period of the foundation of the cemetery.

It is nearly twenty-nine years since, by the wise forethought of the City Council, a tract of land embracing an area of about twenty-four acres was purchased and forever devoted to the purpose of burial. This territory, situated on the western border of the city and extending with gradual descent to Charles River, was chosen after the most careful investigation, and deemed eminently adapted by its variety of surface to the use for which it was set apart. The general characteristics of the land were in many respects similar to those of the neighboring cemetery of Mount Auburn; and although a part of our ground was low and marshy, and other portions unfit for interments, it was mostly elevated and dry. A proportionately small outlay was required to prepare the grounds for the reception of the dead, and on Nov. 1, 1854, the enclosure was consecrated and named the Cambridge Cemetery. A subsequent purchase of adjoining land added eleven and a half acres, thus making a total area of nearly thirty-six acres included within the cemetery limits.

It was the intention of the City Council, that the ownership of lots in these grounds should be restricted to citizens of Cambridge, although no provision of the kind was inserted in the charter; and this intent has been so far carried out, that no deed of such lots has ever been given by the city to others than actual residents.

The early attractions of the spot were such that applications were often made for burial lots by non-residents, but all such were invariably refused.

At the time of the first annual report of this Board, in 1855, the population of Cambridge was ascertained by the census at 20,473. The number of interments for that year, not including removals from other places, was 208; the whole number with such removals being 375. The population of our city in 1881 was about 54,000; and the number of burials, as stated elsewhere in this report, was 587. The whole number of interments in this cemetery since its establishment in 1854 is 11,936, an aggregate corresponding nearly to the entire population of the city at the time of the adoption of its charter in 1845. Thus, as year by year our departed ones in unending procession have found their last abode within these sacred precincts, another city has entrenched itself in our midst, all unmindful of the bustling life that everywhere surrounds it.

During the past year, as heretofore, this Board has endeavored to exercise its trust with watchful care; and no effort has been spared, within its limited means, which could add to the natural attractions of the grounds, and render them yet more worthy of the tender associations of love and memory evermore to be connected with the place.

For the convenience of those wishing to obtain lots, a book of plans has been prepared by the City Engineer, and may be examined at his office. Plans of new lots will from time to time be added, as fast as prepared. A statement of the receipts and expenditures, with other statistics relating to the cemetery for the past year, is given below.

The receipts of the Cambridge Cemetery for the year 1881 have been as follows: —

Cash received for burial lots	$8,190 41
" " care of lots	2,768 18
" " foundations	347 46
" " burial fees	1,727 50
" " brick graves	80 00
" " hay	65 02
" " wood	5 06
" " myrtle	111 25
" " top-dressing lots	61 00
" " granite posts	644 00
" " interest on the fund for the perpetual care of lots	166 50
	$14,166 38

The expenditures for the year 1881 have been as follows: —

For Superintendent's salary	$1,299 96
Sundry workmen	6,685 23
Biers, bricks, and car tickets	85 00
Cement, stone, and canvas	75 36
Cutting figures, disinfectant, and directory	95 78
Fuel and grave covers	173 60
Hardware, tools, and cleaning headstones	195 02
Hose	70 39
Land bought	412 78
Loam and manure	1,007 14
Lumber and plants	285 15
Painting, glazing, and ploughing snow	74 19
Postage, grass seed, and sods	611 36
Stationery, printing, and stone posts	287 81
Teaming and water	228 92
	$11,587 69
The number of interments during the year was	587
The number of lots prepared during the year	132
Lots prepared and now for sale	76
Estimated value of prepared lots	$12,496 99

There has been received and paid into the City Treasury for the perpetual care of lots the sum of $850, which with amounts paid previously makes the total amount of this fund $3,250.

It was suggested in the First Annual Report of this Board, that if a public highway should be opened from Mount Auburn Street, between Sparks and Lowell Streets, extending along

the banks of the river, and an entrance to the cemetery be laid out on the east side of the grounds, a reduction of nearly one half would be made in the distance, besides avoiding the hill near the present entrance. An additional reason for the laying out of such a highway may be found in the fact that all who wish to enter our cemetery from the Cambridge side must cross the borders of an adjoining town in order to reach the gateway. Although this desirable improvement cannot be looked for during the coming year, we may confidently hope that the time is not remote in the future when it may be accomplished without sensible addition to the financial burdens of our citizens.

The amount required for cemetery purposes for the year 1882 is $12,000.

The receipts are estimated at $12,000.

All of which is respectfully submitted.

JAMES A. FOX,
WILLIAM PAGE,
GEO. S. SAUNDERS,
SILAS B. BUCK,
JOHN F. O'BRIEN,
GEO. T. GALE,
CURTIS DAVIS,

Commissioners of the Cambridge Cemetery.

REPORT

OF THE

OVERSEERS OF THE POOR.

CAMBRIDGE, Dec. 27, 1881.

To the Honorable the City Council of the City of Cambridge:—

GENTLEMEN, — The Board of Overseers of the Poor of the City of Cambridge herewith respectfully submits its annual report.

The same general system pursued during the past five years, with such changes as have become necessary, has been continued, with encouraging results in favor of a wise distribution of relief to the deserving poor, and a corresponding benefit to the city treasury.

The Board has continued the practice of taking histories of the applicants for aid, and 389 of these histories have been taken within the past year, embracing 961 persons, 291 of whom are settled in Cambridge, 233 in other cities and towns, and 437 State paupers.

The number of paupers supported by the city at the various institutions during the past year has been as follows: —

City Almshouse	250
State Workhouse	1
State Reform School	7
State Industrial School	1
State Primary School	1
Middlesex House of Correction	7
State lunatic hospitals	43
Total	310

The expenditures for outside aid have been $17,201.32; $7,738.69 of this amount have been expended for the support of the insane at the various State institutions.

The receipts have been $5,949.26, leaving a total cost of $11,252.06 for the support of the poor outside of the almshouse.

Almshouse.

Total number of inmates during the year	250
Total number present Nov. 30, 1881	128
Average monthly number	133

The report of the warden, William E. Hough, shows that of the 143 inmates admitted during the year, 123 entered on the Overseers' permits, and 20 were sentenced by the Cambridge Police Court. 92 of those admitted were males, 51 females, 88 adults, and 55 minors. 30 boys have been confined in the institution for a term of two years for habitual truancy.

There have been 122 discharged, and 13 have died during the year.

Included in the total number of inmates present Nov. 30, 1881, are 19 of the chronic mildly insane class, 9 of whom are males and 10 females. These are cases transferred, after due investigation, from the State lunatic hospitals to the almshouse.

The city school, which is under the care and control of the School Committee, has numbered 38 pupils during the year, and 29 were present at its close.

The Assistant City Physician, Dr. O. C. Turner, has administered to the wants of the sick inmates of the almshouse, as well as to those of the outside poor. He has made 142 visits to the almshouse sick, and 2,379 visits upon 307 patients outside of the institution. Of the latter number 83 had a settlement in Cambridge, 66 belonged to other cities and towns, and 158 were State poor. He has vaccinated 69 persons under direction of the Overseers of the Poor, and has examined 11 persons alleged to be insane, and granted certificates of insanity in 9 cases. He has attended 12 cases of obstetrics.

A schedule of personal property of the almshouse, as prepared in detail by the warden, shows a valuation of $13,528.67 on Nov. 30, 1881.

$2,670.76 were received from the sale of farm products and stone from the ledge. The work on the farm and ledge has been done almost exclusively by the inmates of the institution.

The expenditures for the almshouse have been $15,227.05.
The expenditures for the farm and ledge have been $1,052.78.
The receipts for the almshouse have been $667.88.
The receipts for the farm and ledge have been $2,562.19.

Total expense of almshouse, farm, and ledge	$16,279 83
Total receipts " " "	3,230 07
Net cost " " "	$13,049 76

House Offal.

The labor of collecting the house offal has materially increased during the past year.

The expenditures of this department have been	$7,067 92
The receipts have been	5,536 88
Leaving a total cost of collection above receipts of	$1,531 04

Recapitulation.

The appropriation, with estimated revenue, made by the City Council for the pauper department, almshouse, and collection of house offal, for the financial year commencing Dec. 1, 1880, was $41,000.

There have been expended	$40,549 07
The receipts have been	14,716 21
Leaving a total cost to the city of	$25,832 86

The cost of the care and maintenance of the poor for the year ending Nov. 30, 1881, not including the expenditures and receipts for house offal which in no way pertain thereto, was $11,252.06 outside aid, of which $7,738.69 were for the insane; and $13,049.76 almshouse, farm, and ledge, making the total cost $24,301.82.

The increased expenditure during the year has been caused by the larger amount required for the support of the insane poor at the various State hospitals, and by the change made by the legislative pauper enactments, placing upon the cities and towns the burden of relieving the wants of a very large class of female poor hitherto supported at the expense of the State.

JAMES A. FOX,
CHARLES E. VAUGHAN,
SUMNER ALBEE,
J. C. WELLINGTON,
GEORGE O. CHAMBERLAIN,
Overseers of the Poor.

REPORT

OF

THE CITY PHYSICIAN.

To the City Council of Cambridge:—

Gentlemen,—The following report of the doings of this office is submitted in accordance with the provisions of Chapter 25 of the ordinances of the city of Cambridge.

One hundred and forty-two visits have been made at the almshouse, and 61 patients have received medical treatment in the hospital wards of this institution.

Two thousand three hundred and seventy-nine visits have been made to the sick poor outside of the almshouse, in attendance upon 307 different persons; of these, 83 had legal settlements in the city of Cambridge, 66 in other towns and cities, and 158 were State paupers.

Sixty-nine persons have been vaccinated under direction of the Overseers of the Poor; and, in connection with the health officer, 501 vaccinations have been made by order of the Board of Health.

Eleven persons alleged to be insane have been examined; certificates of insanity have been issued in regard to nine of them.

Twelve women have been attended in childbirth.

Thirty-eight deaths, including 13 at the almshouse, have occurred in this practice from the following causes: —

Consumption	13
Pneumonia	3
Disease of brain	2
Cholera infantum	2
Diphtheria	2
Typhoid fever	2
Apoplexy	1
Chronic cystitis	1

Congenital syphilis	1
Dropsy	1
Disease of kidneys	1
Disease of liver	1
Gangrene	1
Infantile debility	1
Membranous croup	1
Old age	1
Paralysis	1
Paralysis following diphtheria	1
Still-born	1
Whooping cough	1

Sixteen applicants for State aid have been examined; and certificates of death have been made out, after proper examination, of the twenty-eight persons dying without a physician in attendance.

Dr. O. C. Turner has continued to act through this year as assistant city physician, and I beg leave here to call attention to his faithful services.

Respectfully submitted,

H. P. WALCOTT, M. D., *City Physician.*

ANNUAL REPORT

OF THE

CHIEF ENGINEER OF THE FIRE DEPARTMENT,

FOR THE YEAR ENDING NOV. 30, 1881.

CHIEF ENGINEER'S OFFICE, CITY HALL,
CAMBRIDGE, NOV. 30, 1881.

To the Honorable Mayor and the City Council:—

GENTLEMEN, — In compliance with Sect. 6 of the ordinance in relation to the Fire Department, I herewith present my third annual report, showing the receipts and expenditures, the condition of the apparatus, the number of fires and alarms, the amount of losses and insurance, and giving such other information as is required by the ordinance.

Membership.

The force now numbers ninety-seven men, rated as follows: One chief engineer, three assistant engineers, five steamer companies of twelve men each, one chemical company of two men, two hook-and-ladder companies of fourteen men each, one relief engineer, and two telegraph operators; twenty-two of these are permanently employed, the remainder being call-men.

Appropriations, Receipts, and Expenditures.

The appropriation at the beginning of the fiscal year was $54,900, to which an additional appropriation of $821.90 was added, making a total of $55,721.90. The receipts of the department were $333.50. The expenditures of the department have been $55,721.90, as follows: —

Services of members, including salaries of engineers . . .	$31,464 17
Water rates for hydrants, reservoirs, and house supplies . .	9,150 00
Hay, grain, and straw	3,006 54
Apparatus and repairs	2,443 66
Amount carried forward	$46,064 37

Amount brought forward		$46,064 37
Houses, repairs of		1,582 65
Hose and repairs		1,246 72
Fuel		1,236 99
Gas		1,086 96
Telegraph supplies and repairs		976 56
Horse hire and men		939 25
Horses		500 00
Harnesses and repairs		494 87
Horse-shoeing		393 28
Washing		329 72
House supplies		272 46
Hydrants, care of		201 27
Hardware and tools		133 51
Veterinary services and medicine		77 30
Miscellaneous		185 99
Total		$55,721 90
Appropriation	$54,900 00	
Additional appropriation	821 90	
		$55,721 90

Apparatus.

The apparatus in general is in good working order. Early in the year, Engine No. 2 was furnished with a new boiler, and was otherwise repaired and painted. Hose Carriage No. 4 was thoroughly repaired. It was provided with a new set of wheels, and painted, making the carriage as good as new. Hook and Ladder Carriage No. 1 was generally overhauled, repaired, and painted. It was also furnished with a 65-foot Bangor extension ladder.

The engine now used as a relief is not in what I consider a reliable condition. It is old and considerably worn, and in my opinion it would be economy on the part of the city to dispose of this and another old engine, and purchase a new one to take the place of Engine No. 1, which, being the oldest in active service, would answer the purpose of a relief.

Relief Valves.

Engines No. 1, 3, and 5 have been furnished, during the year, with the Shaw automatic relief valve; also with the Haley controlling nozzle. The five engines now in active ser-

vice are provided with these valves and nozzles, Engines 2 and 4 having had them in use for the past two years, and they continue to work in a satisfactory manner.

Hose.

In the early part of the year, 1,500 feet of two-ply cotton hose was purchased of the Boston Woven Hose Company. The total amount of hose now in service is 12,250 feet, — 7,150 cotton, good, 1,150 cotton, ordinary, and 3,950 leather, ordinary ; 950 feet of condemned leather hose was exchanged in part payment for the cotton hose above mentioned.

Additional hose will be needed during the coming year; and I would recommend that the necessary amount be purchased.

Horses.

The horses used in the department, with few exceptions, are in good condition, the number required to perform the duty being twenty-two. During the year two were disposed of, one on account of lameness and one on account of old age, which rendered them unfit for the duty required. Two were purchased to fill their places. It may be found necessary to make other changes the coming year.

Harnesses.

The department has been furnished with the Berry patent swinging harness. It is a great relief to the horses, for before its adoption they were obliged to wear the harness day and night, except while being groomed. It is also a great saving of expenditure, as the harnesses were constantly needing repairs, owing to the horses rubbing them against the sides of the stalls.

Fire-Alarm Telegraph.

This most important branch of the service still continues to prove its value. Since my last report but few changes have been made. The lines have been extended through Potter Street, connecting at Third Street, thereby dispensing with the cable used in crossing Broad Canal, which had been broken several times by vessels passing through the draw.

By order of the Committee on Fire Department, Box 87 was purchased and located on Lake View Avenue; Box No. 125

was purchased by Frank A. Kennedy, and placed on his cracker bakery, Green Street, as he desired to have prompt communication with the department in case of fire in his factory. It can also be used in case of fire in the immediate vicinity.

There are 65 street signal boxes, 9 engine-house gongs, 9 engineer and police gongs, 4 tappers, 4 automatic repeaters, 5 galvanometers, 2 switch-boards, 5 bell strikers, 2 sounders, 415 battery jars, 295 poles, and 85 miles of line wire; also a horse and wagon, a quantity of supplies on hand, and the necessary tools for the care and repair of the fire alarm.

Houses.

The fire stations are generally in good condition, with the exception of the house occupied by Engine No. 3, and the house occupied by Hook and Ladder No. 2, both of which need repairs. Since my last report, the quarters occupied by Engine No. 2 have been remodelled, the change made adding very much to the appearance of the house. The horses now stand facing the engine-room, thereby allowing quicker time to be made in hitching up in case of an alarm. The engine-room floor of the house occupied by Engine No. 5 has been relaid, also the stable floor of the quarters occupied by the Chemical Engine; and other improvements have been made in the last-named house which were very much needed.

Appointments and Discharges.

Engine Co. No. 1. John B. Byron was discharged, at his own request, Jan. 18, and Charles A. Powers was appointed to fill the vacancy Jan. 26. Edwin E. Keyes, fireman, was discharged April 5, and James Jefferson was appointed to fill the vacancy April 6. Daniel E. Shea was appointed hoseman May 4. Walter H. Green was discharged for neglect of duty Nov. 11, and William A. Carlin was appointed to fill the vacancy Nov. 23.

Engine Co. No. 2. Charles E. Conner, fireman, was promoted to relief engineer July 20, and William E. Cade was appointed to fill the vacancy same date.

Engine Co. No. 3. Capt. William Parker was discharged at his own request Jan. 26, and John S. Dooris was appointed hoseman same date.

Engine Co. No. 5. Charles E. Berry, engineer, was discharged at his own request June 30, and John D. Thompson, relief engineer, was appointed to fill the vacancy July 20. Thomas McIntire was discharged at his own request Sept. 26, and George W. Butler was appointed to fill the vacancy Sept. 28.

Hook and Ladder Co. No. 2. John D. DeRonde was discharged at his own request Dec. 18, and Timothy Ryan was appointed to fill the vacancy Dec. 22. James M. Keaney was discharged at his own request Jan. 20, and John Gaughan was appointed to fill the vacancy Jan. 26. George E. Carter was discharged at his own request Nov. 30.

Accidents.

Feb. 7. Chemical Engine No. 1, in turning the corner of Green and Pearl Streets, while responding to an alarm of fire, was overturned and considerably damaged, owing to the condition of the streets, which were covered with snow and ice.

Feb. 26. In answering an alarm of fire from Box 24, Engine No. 1 was upset while turning the corner of Main and Pearl Streets, and badly damaged by coming in contact with the rails of the horse-car track.

March 24. In answer to an alarm from Box 75 it was found that Catherine, wife of John H. Haley, living at No. 1 Emerson's block, Crescent Avenue, had her clothing accidentally set on fire by her six-year-old son, who was at the time playing with a piece of lighted paper, burning her in a shocking manner, and causing her death in a few hours.

June 2. Elbridge L. Wheeler, of Hook and Ladder Company No. 2, was painfully burned on his hands while opening the door of a burning building.

Capt. Thomas L. Hunter, of Hook and Ladder Company No. 2, in attempting to get upon a passing wagon, while proceeding to a fire Sept. 27, was run over and severely injured in his left foot, which disabled him from doing duty, or performing his daily avocation for five weeks.

By the partial burning of a dwelling-house on Hancock Street, Oct. 4, Charles O'Brien was severly injured by cuts and bruises in escaping from the building through a window. He

was asleep in the upper chamber at the time the fire was discovered, and had a narrow escape from death by suffocation.

John H. Walker, driver of Engine No. 2, received a bad cut in the foot from a piece of glass while on duty at a fire, Nov. 28.

James F. Glynn, of Engine Co. No. 5, sprained his ankle while stepping from the pan of the engine on its arrival at a fire, Nov. 28.

Albert F. Sawyer, driver of Hose Carriage No. 2, strained his back while delivering coal to the engines, Nov. 28.

William Haley, of Hook and Ladder Co. No. 2, was painfully burned on the face and hands while on duty, Nov. 28.

Acknowledgments.

In closing this report, I desire to express my thanks to his Honor the Mayor, and the City Council, for their care in providing for the wants of the department; also to the Committee on Fire Department for their hearty co-operation.

To Chief Green of Boston, Chief Hopkins of Somerville, and the officers and members of their departments, for the valuable assistance rendered at fires in this city, I extend my hearty acknowledgments.

Chief Hagar and officers of the police force, the Board of Engineers, and the officers and members of the several companies, will also accept my thanks for their prompt responses to duty.

Respectfully submitted,

THOMAS J. CASEY, *Chief Engineer.*

APPENDIX.

Joint Standing Committee on Fire Department.

ALDERMEN..... Chapman and Doyle.
COUNCILMEN..... Bennink, Davis, and Henderson.

Board of Engineers.

Name.	Residence.	Rank.	Age.
Thomas J. Casey.....	173 Cambridge St..	Chief.....	48
Richard F. Tobin	5 Winsor St.	1st Assistant ..	37
Nathaniel W. Bunker....	6 Beech St.	2d Assistant...	38
Charles W. Brackett	133 Mt. Auburn St.	3d Assistant...	45
Nathaniel W. Bunker....		Secretary	

Engine Company No. 1.

House, Brattle Square.

Name.	Rank.	Age.	No. of Badge.
Edward E. Priest	Engineer	44	3
Hiram W. Hooker	Driver.....	43	5
Robert T. Hixon.....	"	37	10
William H. Emery.....	Foreman.....	48	1
John H. Brown.....	Asst. Foreman	30	11
James Jefferson.....	Fireman	28	2
John L. Jones, Jr.....	Hoseman	30	4
John K. Perkins	"	31	12
Edward B. O'Brien.....	"	30	9
Charles A. Powers	"	35	6
Daniel E. Shea	"	25	7
William A. Carlin	"	30	8

Engine Company No. 2.

House, Main Street, near Winsor.

Name.	Rank.	Age.	No. of Badge.
Thomas Wiseman	Engineer	37	17
John H. Walker	Driver	52	19
Albert F. Sawyer	"	38	20
William B. Cade	Foreman	47	15
Daniel McCarthy	Asst. Foreman	45	21
William E. Cade	Fireman	22	23
Arthur C. Day	Hoseman	44	25
James Cunningham	"	39	28
Benjamin D. Foss	"	45	18
Joseph Fellows	"	30	22
John McCarthy	"	31	24
John Haley	"	27	27

Engine Company No. 3.

House, Fourth Street, near Cambridge.

Name.	Rank.	Age.	No. of Badge.
Hiram Blood	Engineer	49	31
James S. Casey	Driver	45	33
Lorenzo H. Dale	"	39	34
William F. Newman	Foreman	35	38
Edwin Winward	Asst. Foreman	37	39
Elliot E. Alley	Fireman	45	30
John Casey	Hoseman	31	41
Walter Baker	"	27	42
Timothy J. Mahoney	"	33	36
William H. Murray	"	30	35
Louis J. Stanger	"	27	32
John S. Dooris	"	36	29

Engine Company No. 4.

House, North Avenue, near Russell Street.

Name.	Rank.	Age.	No. of Badge.
John E. Ricker	Engineer	37	45
Charles R. Hooker	Driver	37	48
Sylvanus G. Griffin	"	34	46
Edgar H. Locke	Foreman	34	53
William J. Hanna	Asst. Foreman	35	52
Benjamin Young	Fireman	37	49
Hugh T. Barker	Hoseman	30	51
J. Herbert Griffin	"	28	55
Arthur C. Griffin	"	31	44
James W. Wright	"	24	56
Josiah P. Parsons	"	33	43
George W. Gilman	"	24	54

Engine Company No. 5.

House, Inman Square.

Name.	Rank.	Age.	No. of Badge.
John D. Thompson	Engineer	40	102
Joseph P. Cartwright	Driver	45	104
Francis P. Carr	"	37	105
Francis P. Scanlan	Foreman	35	100
Conrad D. Kinnear	Asst. Foreman	42	101
George W. McIntire	Fireman	26	103
James F. Glynn	Hoseman	30	109
John Fitzgerald	"	34	110
Frank C. Mullett	"	29	106
William T. King	"	25	107
Charles E. Warren	"	37	108
George W. Butler	"	39	111

Chemical Engine Company No. 1.

House, Central Square Building.

Name.	Rank.	Age.	No. of Badge.
Lewis C. Clark	Engineman	36	78
William H. Foss	Driver	41	76

Relief Engineer.

Name.	Rank.	Age.	No. of Badge.
Charles E. Conner	Engineer	30	16

Hook and Ladder Company No. 1.

House, Brattle Square.

Name.	Rank.	Age.	No. of Badge.
Albert S. Benson	Driver	37	72
Charles Emerson	Foreman	36	69
John T. Mahaffy	Asst. Foreman	36	67
James P. Ewell	Ladderman	45	62
Charles H. Waite	"	35	73
William Parks	"	37	77
William H. Lydston	"	34	68
Clarence A. Moore	"	31	58
Charles A. Sharon	"	32	64
Joseph B. Farmer	"	43	74
Warren H. Dow	"	31	71
Elisha W. Morey	"	34	70
William R. Mitchell	"	29	57
John R. Bartlett	"	48	65

Hook and Ladder Company No. 2.

House, Cambridge Street, corner of Portland.

Name.	Rank.	Age.	No. of Badge.
Jeremiah R. Hobbs	Driver	34	81
Thomas L. Hunter	Foreman	41	93
Joseph E. Chick	Asst. Foreman	31	87
Walter R. Marsh	Ladderman	44	83
Orville W. Van Duzee	"	35	82
George H. Taylor	"	49	79
William Haley	"	33	86
Charles H. Chapman	"	28	89
George E. Carter	"	32	80
James F. Dalton	"	44	95
Michael H. Shea	"	27	90
Elbridge L. Wheeler	"	37	91
Timothy Ryan	"	34	85
John Gaughan	"	39	94

Fire-Alarm Telegraph.

Battery Room, Brattle Square Building.

Name.	Rank.	Age.
George J. Blaisdell	Telegraph operator	37
Arthur W. Daniels	Assistant operator	28

FIRES AND ALARMS.

For the Year commencing Dec. 1, 1880, and ending Nov. 30, 1881.

DECEMBER.

Friday, Dec. 3, 10.58 A. M. Box 61.

Brattle Street. Frame building owned by W. L. Whitney. Loss, $10. Insurance, $1,200. Occupied by J. O. Robart as cabinet-maker. Loss, $52. Insurance, $600. Cause, ignition of naphtha.

Friday, Dec. 17, 5.59 P. M. Box 78.

Wyeth Street. Dwelling owned by James Boyle; occupied by Thomas Cosgrove. Loss trifling. Cause, clothing hanging near stove taking fire.

Saturday, Dec. 18, 10.25 A. M. Box 27.

Cherry Street. Dwelling owned by George Fisher. Loss, $10. Insurance $3,000. Occupied by William Campbell. Cause, sparks from chimney setting fire to roof.

Monday, Dec. 20, 9.27 P. M. Box 74.

Dublin Street Station and Telegraph Office. Owned and occupied by Fitchburg Railroad Company. Loss, $250. No insurance. Cause, overheated stove.

Tuesday, Dec. 21, 4.03 P. M. Box 24.

Decatur Street. Dwelling owned by Michael Egan; occupied by John McKenna. No loss. Cause, soot in chimney taking fire. Alarm needless.

Thursday, Dec. 23, 4.26 A. M. Box 52.

Putnam Avenue. Dwelling owned and occupied by H. A. Hagen. Loss, $131. Insurance, $7,500. Cause, supposed mice and matches.

Friday, Dec. 31, 10.42 P. M. Box 34.

Tremont Street. Dwelling owned and occupied by Mrs. P. M. Howard. Loss, $550. Insurance, $3,500. Also occupied by Mrs. Carlton Parker as dwelling. Loss, $50. No insurance. Cause, breaking of kerosene lamp.

JANUARY.

Monday, Jan. 3, 10.42 A. M. Box 61.

Brattle Street. School-house owned by the City of Cambridge. Loss, $30. No insurance. Cause, defective chimney.

THURSDAY, Jan. 6, 12.30 P. M. Box 28.

Portland Street. Dwelling owned by G. M. Rogers; occupied by Angus McDonald. Loss trifling. Cause, lighted pipe in coat pocket. Alarm needless.

SATURDAY, Jan. 8, 6.55 A. M. Box 59.

Harvard Square. Law School owned and occupied by Harvard College. Loss, $15. Insurance, $5,000. Cause, overheated furnace.

THURSDAY, Jan. 13, 10.24 P. M. Box 52.

Main Street. Dwelling owned and occupied by H. O. Houghton. Loss, trifling. Cause, ignition of escaping gas.

WEDNESDAY, Jan. 26, 7.36 P. M. Box 59.

Brattle Street. Frame building owned by Porter heirs. Loss, $8. Insurance, $3,000. Occupied by Brock Brothers for hardware and stoves. Cause, explosion of kerosene lamp.

FEBRUARY.

THURSDAY, Feb. 3, 6.38, 6.50 P. M. Box 36.

Central Square. Church owned and occupied by First Baptist Society. Loss, $62,170. Insurance, $57,000. Dwelling owned and occupied by Michael Barrett. Loss, $169. Insurance, $5,000. Dwelling owned and occupied by W. H. Woodbury. Loss, $50. Insurance, $4,000. Dwelling owned and occupied by C. C. Nichols. Loss, $50. Insurance, $6,000. Fire originated in church. Cause unknown.

MONDAY, Feb. 7, 5.02 A. M. Box 12.

Water Street. Sugar refinery owned and occupied by Nash, Spaulding & Co. Loss trifling. Cause, overheated tank.

MONDAY, Feb. 7, 8.20 P. M. Box 24.

Brookline Street. Dwelling owned by Patrick McNamara; occupied by William O'Brien. Loss trifling. Cause, explosion of kerosene lamp.

MONDAY, Feb. 14, 7.38 A. M. Box 34.

Union Street. Dwelling owned by G. L. Russ; occupied by J. N. Mosher. Loss, $20. No insurance. Originated in clothing. Cause unknown.

SATURDAY, Feb. 26, 11.43 A. M. Box 24.

Pearl Street. Dwelling owned by William Warnock, Jr.; occupied by Mrs. Mary Roberts. Loss trifling. Cause, pipe smoking.

MONDAY, Feb. 28, 1.30 A. M. Box 39.

Putnam Avenue. Stable owned and occupied by Dover Stamping Company. Loss, $930. Insurance, $1,500. Cause unknown.

MARCH.

MONDAY, March 7, 8.03 P. M. Box 17.

Broadway. Dry-house owned and occupied by Mason & Hamlin Organ Company. Loss, $25. No insurance. Cause unknown.

THURSDAY, March 24, 1.31 P. M. Box 75.

Crescent Avenue. Dwelling owned by Henry Emerson; occupied by J. H. Haley. Damage to building trifling. Cause, child playing with burning paper. Mentioned elsewhere.

APRIL.

SATURDAY, April 2, 1.47 A. M. Still.

Boston, Brighton District. Engine No. 1 rendered assistance under command of Engineer Brackett.

SUNDAY, April 3, 4.11, 4.24, 4.30 P. M. Box 2.

Prison Point Street Lumber Yard. Owned by Boston and Lowell Railroad. Loss on shed and car house, $4,000. Insurance, $4,500. Loss on cars, $12,000. Insurance unknown. Occupied by James & Abbot, lumber. Loss, $7,000. Insurance, $6,000. H. M. Clark & Co., lumber. Loss, $4,500. Insurance, $4,000. Wicker & Blake, lumber. Loss, $230. No insurance. G. H. Peters & Co., lumber. Loss, $250. No insurance. Lamb & Weston, lumber. Loss, $1,734. Insurance, $1,500.

Shepard Morse Lumber Company, lumber. Loss, $4,300. Insurance, $4,000. J. W. Skillings, lumber. Loss, $200. No insurance. Putnam & Treworgy, lumber. Loss, $1,741. Insurance, $2,000. Skillings, Whitney & Barnes, lumber. Loss, $14,814. Insurance, $20,000. E. J. Hammond & Co., lumber. Loss, $1,923. Insurance, $1,923. Ford & Godfrey, lumber. Loss, $200. Insurance, $200. G. B. Sawyer & Co., lumber. Loss, $400. Insurance, $1,000. P. F. Williams, lumber. Loss, $753. Insurance, $2,000. Cause, incendiary.

SUNDAY, April 10, 10.37 A. M. Box 31.

Cambridge Street. Dwelling owned by Marrett & George. Loss, $14. Insurance, $1,500. Occupied by Samuel Gallagher. Loss, $30. No insurance. Cause unknown.

MONDAY, April 11, 9.04 P. M. Box 82.

Brattle Street. False alarm caused by some malicious person, the box having been found open on the arrival of the department.

SATURDAY, April 16, 3.47 P. M. Box 8.

Thorndike Street. Oil clothes manufactory owned and occupied by H. M. Sawyer. Loss, $690. Insurance, $2,900. Cause, spontaneous combustion.

SUNDAY, April 17, 12.15 A. M. Still.

Boston, Brighton District. Engine No. 1 responded under command of Assistant Engineer Brackett.

THURSDAY, April 21, 4.36 P. M. Box 54.

Frisbie Place. Out-building owned and occupied by C. W. Sever. Loss, $8. No insurance. Cause, unknown.

THURSDAY, April 21, 8.04 P. M. Box 9.

Cambridge Street. Oily rags in yard of the F. M. Holmes Furniture Company. No loss. Cause, spontaneous combustion.

SUNDAY, April 24, 4.20 P. M. Box 42.

Western Avenue. Dwelling owned and occupied by Mrs. John Glass. Loss, $37. Insurance, $4.200. Cause unknown.

SUNDAY, April 24, 8.56 P. M. Box 6.

Fire in Boston. The alarm given through a mistake, as it was supposed to be in the vicinity of Gale & Wood's wharf.

MONDAY, April 25, 2.05 P. M. Box 26.

State Street. Carpet-beating establishment owned by Rhoades heirs; occupied by G. F. Ricker & Co. Loss trifling. Cause, sparks from chimney setting fire to roof.

SATURDAY, April 30, 10 P. M. Still.

McCabe Street. Dwelling owned by John Nixon; occupied by several families. Loss trifling. Cause, defective chimney.

MAY.

SUNDAY, May 1, 8.41, 8.48 P. M. Box 9.

East Street. Lumber shed owned and occupied by Holt & Bugbee. Loss, $2,339. Insurance unknown. Cause, incendiary.

SUNDAY, May 1, 8.51 P. M. Box 9.

Cambridge Street. Lumber shed owned and occupied by E. D. Sawyer & Co. Loss trifling. Cause, incendiary.

WEDNESDAY, May 4, 9.45 A. M. Box 59.

Harvard Street. Office owned and occupied by Harvard College. Loss trifling. Cause, sparks from chimney setting fire to roof.

THURSDAY, May 5, 9.06 A. M. Box 59.

Brighton Street. Confectionery establishment owned by William Read; occupied by Mrs. B. A. Bagley. Cause, boiling over of syrup.

MONDAY, May 30, 12.57 A. M. Box 6.

Broadway. Stable owned and occupied by William Dolan. Loss, $200. No insurance. Cause unknown.

JUNE.

THURSDAY, June 2, 9.30 P. M. Box 27.

Bristol Street. Stable owned by W. S. & J. H. Brown. Loss, $775. Insurance, $4,000. Occupied by Robert Smith. Loss, $60. No insurance. Cause, supposed incendiary.

SATURDAY, June 11, 3. P. M. Still.

Main Street. Broom manufactory owned by M. A. Dow. No loss. Occupied by C. P. Keith. Loss, $125. Insurance, $2,000. Cause unknown.

JULY.

SATURDAY, July 2, 5.44 P. M. Box 6.

Main Street. Machine shop owned and occupied by Kendall & Roberts. Loss trifling. Cause unknown.

MONDAY, July 4, 8.40 A. M. Box 47.

Harvard Street. Dwelling owned and occupied by H. E. Jones. Loss slight. Cause, defective gas meter.

MONDAY, July 4, 11.25 A. M. Box 34.

Elm Street. Dwelling owned by Boston Five Cents Savings Bank. Loss, $8. Insurance, $2,000. Occupied by William Perry. Cause, fire-crackers setting fire to roof.

MONDAY, July 4, 2.50 P. M. Box 25.

Sydney Street. Dwelling owned by J. S. Sawyer; occupied by William Gordon. Loss trifling. Cause, fire-crackers setting fire to clothing.

TUESDAY, July 5, 9.08 A. M. Box 14.

Canbridge Street. Dwelling owned by Mrs. Daniel Hagan. Loss, $225. Insurance, $2,800. Occupied by John Church and others. Originated in roof. Cause unknown.

SUNDAY, July 10, 12.16 P. M. Box 46.

Hayes Court. Dwelling owned by G. H. Maynard. Loss, $57. Insurance, $3,000. Occupied by several families. Cause, sparks from chimney setting fire to roof.

MONDAY, July 11, 11.22 P. M. Box 27.

Davis Street. Soap manufactory owned by Brazier and Whittemore estate; occupied by Hale, Teel & Bisbee. No loss. Cause, supposed incendiary.

MONDAY, July 18, 9.18 A. M. Box 17.

Main Street. Dwelling owned by Boston & Albany Railroad. Loss, $15. Insurance, $15. Occupied by H. J. O'Brien. Cause, sparks setting fire to roof.

MONDAY, July 18, 11.20 A. M. Still.

Broadway. Coal owned by A. C. Wellington. No loss. Cause, spontaneous combustion.

MONDAY, July 18, 4.54 P. M. Box 15.

Spring Street. Dwelling owned by Cushman heirs. Loss, $10. Insurance, $1,500. Occupied by W. A. Bell. Loss, $50. No insurance Originated in bedchamber. Cause, children playing with matches.

WEDNESDAY, July 27, 7.12 A. M. Box 53.

Mt. Auburn Street. Church owned and occupied by St. Paul's Catholic Church Society. No loss claimed. Cause unknown.

FRIDAY, July 29, 5.14 A. M. Box 48.

Hampshire Street. Tin-ware manufactory and dwellings owned by Charlestown Five Cents Savings Bank. Loss, $1,000. Insurance, $6,000. Occupied by Philip Malone. Loss, $1,274. Insurance, $5,000. Originated in tin factory. Cause unknown.

FRIDAY, July 29, 1.40 P. M. Box 17.

Pacific Street. Ignition of kettle of tar. Alarm needless.

AUGUST.

WEDNESDAY, Aug. 3, 6.30 P. M. Still.

State Street. Lumber shed owned by Rhoades heirs; occupied by Stetson, Moseley & Co. Loss, $25. Covered by insurance. Cause, supposed incendiary.

FRIDAY, Aug. 12, 6.28 P. M. Box 6.

Main Street. Safe manufactory owned by Samuel Little *et als.*, trustees; occupied by G. L. Damon. Loss trifling. Cause, sparks from chimney setting fire to roof.

SATURDAY, Aug. 13, 9.57 P. M. Box 24.

Brookline Street. Oily rags in the stable yard owned and occupied by William Reardon. Alarm needless.

MONDAY, Aug. 15, 9.05 P. M. Box 73.

Jackson Street. Dwelling owned and occupied by Jeremiah Crowley. Loss, $687. Insurance, $1,000. Cause, defective chimney.

WEDNESDAY, Aug. 17, 11.30 A. M. Still.

School Street. Dwelling owned by George Fisher; occupied by Mrs. M. T. Ireland. Loss, $10. No insurance. Cause, defective kerosene stove.

THURSDAY, Aug. 18, 6.34 P. M. Box 31.

Boston and Albany Railroad Freight Yard. Car owned by Boston and Albany Railroad. Loss, $25. Covered by insurance. Occupied by J. M. Wood for lumber. Loss, $20. No insurance. Cause, supposed incendiary.

SEPTEMBER.

SATURDAY, Sept. 3, 5.30 A. M. Still.

Fire in Somerville. Engine Company No. 4 rendered assistance under command of Assistant Engineer Bunker.

WEDNESDAY, Sept. 7, 6.45 A. M. Still.

Cambridge Street. Dwelling owned by Mrs. L. Grover; occupied by J. W. Dennis. Loss, $10. No insurance. Cause, child and matches.

THURSDAY, Sept. 15, 5.47 P. M. Box 16.

Broadway. Dry-room owned by E. B. Phillips; occupied by Ela Brothers. No loss. Cause, overheated smoke-stack.

TUESDAY, Sept. 27, 8.15 A. M. Box 6.

Pioneer Avenue. Dwelling owned by Dallinger heirs; occupied by James Larkins. Loss trifling. Originated in bedroom. Cause unknown.

OCTOBER.

SATURDAY, Oct. 1, 5.10 P. M. Box 48.

Tremont Street. Unoccupied building owned by Thomas Cowan. No loss. Cause, set on fire by boys. Alarm needless.

SATURDAY, Oct. 8, 6.46 P. M. Box 43.

DeWolf Street. Boat house owned and occupied by John Blakey. Loss trifling. Cause unknown.

THURSDAY, Oct. 13, 7.30 P. M. Still.

Green Street. Dwelling owned and occupied by James Gray. Loss, $18. Insurance, $750. Cause, breaking of kerosene lamp.

FRIDAY, Oct. 14, 3.40 P. M. Box 91.

Fire in Arlington, near Cambridge line. Engine Co. No. 4 rendered assistance under command of Assistant Engineer Bunker.

SUNDAY, Oct. 16, 10.56 P. M. Box 48.

Inman Street. Bakehouse owned by S. L. Montague. Loss, $50. No insurance. Occupied by R. E. Ireland. Loss, $121. Insurance, $500. Cause, unknown.

WEDNESDAY, Oct. 19, 1.55 A. M. Still.

Boston, Brighton District. Engine Company No. 1 responded under command of Assistant Engineer Brackett.

FRIDAY, Oct. 21, 11 A. M. Still.

Ericsson Court. Dwelling owned by G. H. Thwing; occupied by F. R. Cheeseman. Loss trifling. Cause, sparks setting fire to roof.

MONDAY, Oct. 24, 7.30 P. M. Box 4.

Carson Street. Stable owned and occupied by Francis Devine. No loss. Cause, upsetting of lamp. Alarm needless.

TUESDAY, Oct. 25, 9.33 P. M. Box 13.

Fifth Street. Dwelling owned by Mrs. G. W. Hanscomb; occupied by Mrs. Catherine Gerstlauer. No loss. Cause, breaking of kerosene lamp. Alarm needless.

WEDNESDAY, Oct. 26, 9.44 A. M. Box 92.

Holworthy Street. Dwelling owned and occupied by Gilbert Devoran. Loss, $385. Insurance, $1,500. Cause unknown.

MONDAY, Oct. 31, 10.39 A. M. Box 46.

Hancock Street. Dwelling owned by J. J. Whalen. Loss, $175. Insurance, $500. Occupied by Thomas Purcell. Loss, $50. No insurance. Cause, child playing with matches.

MONDAY, Oct. 31, 1.15 P. M. Box 46.

Rekindling of fire. Alarm needless.

NOVEMBER.

MONDAY, Nov. 7, 8.50 A. M. Box 59.

Dunster Street. Repair shop owned and occupied by Union Horse Railroad Company. Loss trifling. Cause, lighted lamp setting fire to floor.

TUESDAY, Nov. 8, 8.46 P. M. Box 51.

Broadway. False alarm; box found open.

WEDNESDAY, Nov. 9, 8.48 P. M. Box 35.

Harvard Street. False alarm; box found open.

FRIDAY, Nov. 11, 1.35, 1.41 A. M. Box 26.

State Street. Planing mill owned by Rhoades estate. Loss, $2,550. Insurance, $5,000. Occupied by Alfred Fitzpatrick as planing mill. Loss, $173. Insurance, $1,300. Occupied by Guild, Church & Co., piano manufacturers. Loss, $. Insurance, $. Occupied by Wood Brothers, piano action. Loss, $950. Insurance, $2,000. Lewis Jeser. Loss on tools, $123. Insurance, $200. Originated in Wood Brothers'. Cause, supposed spontaneous combustion.

SATURDAY, Nov. 12, 4.50 P. M. Box 25.

Blanche Street. Window-shade manufactory owned and occupied by Brown, Murphy & Thorndike. Cause, escaping steam. Alarm needless.

SUNDAY, Nov. 13, 6.34 P. M. Box 57.

Oxford Street. False alarm; box found open.

MONDAY, Nov. 14, 12.35 P. M. Box 28.

Hampshire Street. Dwelling owned by George Montgomery; occupied by John Riley. No loss. Cause, soot in chimney taking fire. Alarm needless.

TUESDAY, Nov. 15, 11.14 A. M. Box 27.

Washington Street. Untenantable dwelling owned by D. A. Buckley. Loss trifling. Cause, set on fire by boys.

SUNDAY, Nov. 20, 4.23 A. M. Box 15.

Rear of Charles Street. Dwelling owned by W. H. Carroll. Loss, $420 Insurance, $2,000. Occupied by Patrick Friel and Bernard Maguire. Loss, $100. No insurance. Cause, defective chimney.

SUNDAY, Nov. 20, 3.49 P. M. Box 48.

Hampshire Street. Dwellings owned by Charlestown Five Cents Savings Bank. Loss, $200. Insurance, $6,000. Occupied by several families. Cause, defective chimney.

MONDAY, Nov. 21, 6.34 A. M. Box 28.

Harvard Street. Dwelling owned by J. W. Hammond. Loss, $50. Insurance, $1,000. Occupied by Joseph Johnson. Loss, $40. No insurance. Originated among clothing. Cause unknown.

SUNDAY, Nov. 27, 5.41 A. M. Box 21.

Foot of Putnam Avenue. Water tank owned by Boston and Albany Railroad Company. Loss trifling. Cause unknown.

MONDAY, Nov. 28, 9.51, 9.55, 9.59 P. M. Box 16.

Potter Street. Rubber goods manufactory owned and occupied by American Rubber Company. Loss, $375,000. Insurance, $193,864. Originated in dry-room. Cause unknown.

TUESDAY, Nov. 29, 12.14 P. M. Box 16.

Potter Street. Rekindling of fire.

The total number of alarms given during the year was ninety-five, as follows: Ward One, eighteen; Ward Two, thirty-three; Ward Three, nineteen; Ward Four, nineteen; Ward Five, six.

Total amount of loss	$510,183 00
Total amount of insurance	399,937 00
Total amount of insurance paid	311,912 10

HYDRANTS.

Located in Ward One.

Appleton Street, corner Highland.
Ash Street, corner Acacia.
Baldwin Street, corner Emmons Place.
Banks Street, corner Flagg.
Banks Street, corner Cowperthwaite.
Banks Street, corner Grant.
Bow Street, corner Linden (post).
Brattle Street, opposite the estates of Messrs. Longfellow and Hastings.
Brattle Street, corner Ash.
Brattle Street, corner Hilliard.
Brattle Street, corner University Press estate.
Brattle Street, corner Lowell.
Brattle Street, corner Fresh Pond Lane.
Brattle Street, opposite Mount Auburn greenhouse.
Brattle Street, front of Mrs. Wyeth's estate.
Brattle Street, corner Willard.
Brattle Street, corner Story.
Brattle Street, corner Channing.
Brattle Street, corner Lake View Avenue.
Brattle Street, corner Hawthorn (post).
Brattle Street, near Brighton (post).
Brighton Street, corner Winthrop (post).
Brighton Street, corner Eliot (post).
Broadway, junction Cambridge Street.
Broadway, near junction Cambridge Street (post).
Broadway, corner Prescott Street.
Broadway, corner Trowbridge Street.
Broadway, corner Quincy Street.
Broadway, corner Ware Street.
Broadway, corner Ellery Street.
Buckingham Street, opposite Stevens's barn.
Buckingham Street, corner Concord Avenue (post).
Cambridge Street, corner Trowbridge.
Cambridge Street, corner Sumner.
Cambridge Street, front of Scientific School (post).
Cambridge Street, corner Quincy (post).
Cambridge Street, opposite Felton (post).
Cambridge Street, corner Ellery (post).
Chauncy Street, near Garden (post).
Chauncy Street, corner Langdon.
Church Street, corner Palmer.
Concord Avenue, corner Sparks Street.
Concord Avenue, opposite Craigie Street.
Concord Avenue, corner Follen Street (post).
Concord Avenue, corner Sparks Street (post).
Coolidge Avenue, between Mt. Auburn Street and Cambridge Cemetery Gate (2 posts).
Craigie Street, midway.
Craigie Street, near corner Sparks.
DeWolf Street, near Cowperthwaite.
Divinity Avenue, opposite Museum.
Dunster Street, corner South.
Dunster Street, corner Mt. Aubnrn.
Dunster Street, near Harvard Square (post).
Eliot Street, in elbow (post).
Eliot Street, corner Winthrop (post).
Ellery Street, corner Main.
Ellery Street, east side, midway between Broadway and Cambridge Street.
Elmwood Avenue, midway (post).
Everett Street, south side, midway between North Avenue and Oxford Street.
Fayerweather Street, corner Brattle.
Fayerweather Street, opposite Reservoir.
Foster Street, corner Foster Place (post).
Garden Street, near Chauncy (post).
Garden Street, corner Mason.
Garden Street, corner Wallace.
Grant Street, corner DeWolf.
Harvard Square, opposite Charles River Bank (post).

Harvard Street, corner Remington.
Harvard Street, opposite Harvard Block (post).
Harvard Street, opposite Linden (post).
Harvard College grounds (three posts).
Hawthorn Street, corner Acacia (post).
Holworthy Street, opposite school-house (post).
Kirkland Street, near Baldwin, south side.
Kirkland Street, corner Trowbridge, south side.
Kirkland Street, corner Irving, south side.
Kirkland Street, corner Sumner, south side.
Kirkland Street, corner Quincy, south side.
Kirkland Street, opposite Memorial Hall.
Lakeview Avenue, 500 feet from Brattle Street. [(post).
Lakeview Avenue, near Brattle Street
Lakeview Avenue, corner Huron Street (post).
Lakeview Avenue, on hill (post).
Lakeview Avenue, near Engine House (post).
Langdon Street, in elbow (post).
Locust Street, corner Holworthy (post).
Main Street, junction Harvard.
Main Street, corner Trowbridge.
Main Street, near Baptist Church.
Mellen Street, corner Oxford.
Mill Street, corner Holyoke (post).
Mill Street, corner Charles River.
Mt. Auburn Street, corner Brighton (post).
Mt. Auburn Street, opposite Athens.
Mt. Auburn and Bow Streets.
Mt. Auburn Street, opposite DeWolf.
Mt. Auburn Street, corner Willard (post).
Mt. Auburn Street, corner Sparks (post).
Mt. Auburn Street, opposite McDonald's marble works.
Mt. Auburn Street, near railroad stables.
Mt. Auburn Street, near Lowell (post).
Mt. Auburn Street, corner Dunster (post).
Mt. Auburn Street, corner Holyoke (post).
Mt. Auburn Street, corner Athens (post).
Mt. Auburn Street, corner Banks (post).
Mt. Auburn Street, corner DeWolf (post).
Mt. Auburn Street, corner Story (post).
Mt. Auburn Street, corner Hilliard (post).
Mt. Auburn Street, opposite City Building (post).
Mt. Auburn Street, opposite Brewer (post).
Mt. Auburn Street, near car stables (post).
Mt. Auburn Street, opposite Bath (post).
Mt. Auburn Street, near Coolidge Lane (post).
Mt. Auburn Street, corner Elmwood Avenue (post). [(post).
Mt. Auburn Street, corner Channing
Murray Street, near Charles River.
North Avenue, corner Chauncy Street.
North Avenue, corner Shepard Street (post).
North Avenue, corner Holmes Place.
North Avenue, corner Jarvis Street.
North Avenue, front of burial-ground (post).
North Avenue, corner Church Street.
North Avenue, corner Garden Street (post).
Oxford Street, near Jarvis.
Oxford Street, corner Everett.
Phillips Place, corner Berkeley Street.
Prescott Street, corner Harvard.
Prescott Street, between Harvard Street and Broadway (post).
Putnam Avenue, corner Western Avenue.
Putnam Avenue, between Mt. Auburn and Main (post).
Putnam Avenue, corner Flagg Street (post).
Putnam Avenue, opposite Putnam Court (post).
Putnam Avenue, near Hews Street (post).
Putnam Avenue, corner Sands Street (post).
Quincy Street, midway between Harvard and Broadway (post).
Sands Street, opposite planing mill.
South Street, corner Dunster (post).
Sparks Street, corner Vassal Lane (post).
Sparks Street, corner Foster (post).
Sparks Street, opposite Charles T. Russell's.
Trowbridge Street, midway between Main and Harvard (post).
Waterhouse Street, opposite Concord Avenue (post).
Waterhouse Street, opposite Follen (post).
Wendell Street, near Carver (post).
Willard Street, corner Foster (post).
Worthington Street, near engine house Water Works (post).

Located in Ward Two.

Amory Street, corner Summer.
Antrim Street, near Broadway.
Antrim Street, near Cambridge (post).
Antrim Street, midway (post).
Austin Street, corner Essex (post).
Austin Street, corner Prospect (post).
Austin Street, corner Temple (post).
Bigelow Street, midway between Main and Harvard.
Brewery Street, near Hastings (post).
Bristol Street, corner Portland (post).
Broadway, corner Highland Avenue.
Broadway, corner Third Street.
Broadway, corner Hancock Street.
Broadway, corner Antrim Street.
Broadway, corner Tremont Street (post).
Broadway, corner Elm Street.
Broadway, corner Pelham Street.
Broadway, corner Dana Street.
Broadway, corner Ellsworth Avenue.
Broadway, corner Fayette Street.
Broadway, corner Amory Street.
Broadway, corner Norfolk Street.
Broadway, corner Boardman Street.
Broadway, opposite Thayer's Laboratory.
Broadway, near Broadway House.
Broadway, corner Clark Street (post)
Broadway, corner Third Street (post).
Broadway, corner Davis Street (post).
Broadway, corner Brewery Street (post).
Broadway, opposite Mason & Hamlin's building (post).
Broadway, near Sixth Street (post).
Broadway, corner Pioneer Street (post).
Cambridge Street, corner Harding.
Cambridge Street, corner Norfolk.
Cambridge Street, corner Willow.
Cambridge Street, corner Prospect (post).
Cambridge Street, corner Tremont.
Cambridge Street, opposite Fayette.
Cambridge Street, north side, near Springfield. [Avenue.
Cambridge Street, opposite head of Maple
Cambridge Street, corner McCabe (post).
Cambridge Street, corner Elm (post).
Cambridge Street, corner Winsor (post).
Cambridge Street, near Mr. Rafferty's house (post).
Cambridge Street, nearly opposite Ellsworth Avenue (post).
Centre Street, opposite Dana School-House.
Clinton Street, near G. T. Gale's house (post).
Columbia Street, corner Lincoln.
Columbia Street, corner Market.
Columbia Street, corner Hampshire.
Columbia Street, corner Harvard.
Dana Street, corner Chatham (post).
Davis Street, corner Broadway.
Elm Street, opposite Lincoln (post).
Elm Street, corner Market.
Essex Street, westerly side, midway between Harvard and Austin (post).
Fayette Street, 500 feet from Broadway.
Hampshire Street, corner Amory (post).
Hampshire Street, near Somerville line (post).
Hampshire Street, corner Portland (post).
Harvard Street, corner Pine.
Harvard Street, corner Hancock.
Harvard Street, corner Clark.
Harvard Street, corner Dana.
Harvard Street, corner Moore.
Harvard Street, corner Norfolk.
Harvard Street, corner Portland.
Harvard Street, corner Brewery.
Harvard Street, corner Clinton.
Harvard Street, near railroad crossing (post).
Harvard Street, between railroad crossing and Brewery Street (post).
Harvard Street, opposite Davis (post).
Harvard Street, corner Cherry (post).
Harvard Street, corner Winsor (post).
Harvard Street, opposite Elm (post).
Harvard Street, corner Essex (post).
Harvard Street, corner Prospect (post).
Harvard Street, between Prospect and Inman Streets (post).
Harvard Street, corner Bigelow (post).
Harvard Street, corner Lee (post).
Highland Avenue, east side, midway.
Houghton Street, corner Bolton, in Somerville.
Hunting Street, 400 feet from Cambridge.
Inman Street, near Austin.
Inman Street, corner Harvard.
Inman Street, corner Broadway.
Inman Street, opposite Summer.
Jefferson Street, corner Harding.
Jefferson Street, corner Warren (post).

Lee Street, midway between Main and Harvard (post).
Main Street, corner Lee.
Main Street, corner Hancock.
Main Street, opposite Bay.
Main Street, corner Pelham (post).
Main Street, corner Essex.
Main Street, opposite Pleasant.
Main Street, corner Bigelow.
Main Street, junction Harvard.
Main Street, corner Pioneer (post).
Main Street, opposite Rawson & Hittinger's.
Main Street, opposite Pearl (post).
Main Street, Gale & Wood's driveway (post).
Maple Avenue, midway between Broadway and Cambridge Street.
Market Street, corner Union.
Moore Street, head of Hastings.
Norfolk Street, corner Hampshire.
Norfolk Street, corner Worcester.
Norfolk Street, head of Washington (post).
Oak Street, west side, near Somerville line.
Plymouth Street, corner York.
Portland Street, opposite rolling mill (post).
Prospect Street, opposite B. Tilton's.
Prospect Street, corner Broadway.
Prospect Street, corner Hampshire.
Prospect Street, corner Main.
Prospect Street, corner Gardner.
Prospect Street, opposite school-house, Somerville.
Prospect Street, corner Webster Avenue, Somerville.
Seckel Street, corner Webster Avenue (post).
South Street, opposite Willow, Somerville.
South Street, corner Gore, Somerville.
Tremont Street, near Wellington's house (post).
Tremont Street, near Hampshire (post).
Tremont Street, opposite Gardner (post).
Tremont Street, west side, 200 feet from Cambridge.
Union Street, corner Hampshire.
Ward Street, corner Horace, Somerville.
Webster Avenue, corner Elm.
Webster Avenue, corner Bristol.
Webster Avenue, corner Winsor.
Webster Avenue, corner Hampshire.
Webster Avenue, corner Plymouth.
Webster Avenue, corner Cambridge Street (post).
West Boston Bridge.
West Boston Bridge.
West Street, midway (post).
Winsor Street, corner Lincoln.
Winsor Street, corner Hampshire.
Winsor Street, corner Washington.
Winsor Street, near Somerville line (post).
Winsor Street, corner Broadway (post).

Located in Ward Three.

Binney Street, corner Ninth (post).
Bridge Street, at Wellington's Wharf (post).
Bridge Street, at Sanborn's Wharf (post).
Bridge Street, corner Prison Point.
Bridge Street, corner Short.
Bridge Street, corner Short (post).
Bridge Street, corner Water.
Bridge Street, opposite Bay State glass house.
Bridge Street, near Bay State glass house (post).
Bridge Street, north side, opposite Braman, Shaw & Co.'s.
Bridge Street, opposite Fourth (post).
Bridge Street, between Short and Water (post).
Bridge Street, near Cambridge (post).
Bridge Street, corner Water (post).
Bridge Street, corner East (post).
Cambridge Street, opposite First.
Cambridge Street, corner Carson.
Cambridge Street, corner Daily's Alley.
Cambridge Street, corner Third.
Cambridge Street, junction Bridge.
Cambridge Street, corner Sixth.
Cambridge Street, near railroad crossing (post).
Cambridge Street, opposite Seventh (post).
Cambridge Street, opposite No. 141 (post).
Cambridge Street, near Third (post).
Cambridge Street, corner Fourth (post).
Charles Street, corner Fourth.
East Street, corner North (post).
Eighth Street, corner Cambridge.

Fifth Street, corner Winter (post).
Fifth Street, corner Charles.
Fifth Street, corner Spring.
Fifth Street, corner Cambridge.
Fifth Street, corner Gore.
First Street, near Otis (post).
First Street, corner Spring (post).
Fourth Street, corner Winter (post).
Fourth Street, corner Winter.
Fourth Street, corner Cambridge.
Fourth Street, corner Vine.
Fourth Street, corner Thorndike.
Gore Street, corner Fourth.
Gore Street, corner Carson (post).
Gore Street, corner Carson.
Gore Street, corner Seventh (post).
Gore Street, between Fourth and Fifth (post).
Gore Street, between Fifth and Sixth (post).
Munroe Street, corner Third (post).
North Street, corner East.
North Street, near Glass Company's cutting shop.
Otis Street, corner Third.
Otis Street, corner Seventh.
Otis Street, corner Ninth.
Potter Street, corner Ninth (post).
Prison Point Street, 50 feet north of ice sheds.
Prison Point Street, on railroad track, 300 feet from street.
Prison Point Street, near passenger track (post).
Prison Point Street, on railroad track, 600 feet from street.
Prison Point Street, 400 feet from Bridge Street.
Prison Point Street, near Bridge (post).
Prison Point Street, near ice house (post).
Second Street, corner Thorndike.
Second Street, corner Otis.
Second Street, corner Cambridge.
Sixth Street, corner Gore.
Sixth Street, corner Potter.
Sixth Street, corner Charles (post).
Sixth Street, corner Spring (post).
Spring Street, corner Second.
Spring Street, corner Third.
Spring Street, corner Fourth.
Spring Street, corner Ninth.
Third Street, corner Vine.
Third Street, near Charles (post).
Third Street, corner Bridge (post).
Third Street, corner Potter.
Third Street, opposite gas works (post).
Thorndike Street, corner Sixth.
Thorndike Street, corner Fifth.
Thorndike Street, near Woodbury's mill (post).
Thorndike Street, corner Second (post).
Vine Street, corner Fifth.
Vine Street, corner Sixth.
Water Street, near sugar-house.
Yard of J. P. Squire & Co. (post).

Located in Ward Four.

Austin Street, corner Douglass (post).
Austin Street, corner Norfolk (post).
Blackstone Street, west side, 100 feet from avenue (post).
Brookline Street, corner Allston.
Brookline Street, corner Hamilton.
Brookline Street, corner Valentine.
Brookline Street, corner Putnam Avenue.
Brookline Street, corner Erie.
Brookline Street, corner Franklin.
Brookline Street, corner Chestnut.
Brookline Street, near Henry (post).
Brookline Street, corner Decatur (post).
Brookline Street, corner Lopez (post).
Brookline Street, corner Watson (post).
Cherry Street, opposite Eaton.
Chestnut Street, corner Pearl.
Columbia Street, corner Austin.
Columbia Street, corner Washington.
Cottage Street, corner Pearl (post).
Eaton Street, corner Pine (post).
Erie Street, corner Pearl (post).
Erie Street, between Pearl and Brookline (post).
Fairmont Street, corner Andrew (post).
Franklin Street, corner Soden (post).
Franklin Street, corner Hancock (post).
Franklin Street, corner Bay (post).
Franklin Street, near the hill (post).
Franklin Street, corner Sydney.
Franklin Street, corner Magazine.
Franklin Street, corner Pleasant.
Franklin Street, near Putnam Avenue (post).
Front Street, junction State.

Front Street, corner Columbia (post).
Green Street, opposite Vernon.
Green Street, corner Putnam Avenue.
Green Street, corner Hancock (post).
Green Street, corner Bay (post).
Green Street, midway between Hancock and Vernon (post).
Green Street, corner Vernon (post).
Green Street, corner Pleasant (post).
Green Street, corner Western Avenue (post).
Green Street, corner Pearl (post).
Green Street, corner Brookline (post).
Grigg Street, corner Putnam Avenue.
Kinnaird Street, corner Bay (post).
Magazine Street, corner Cottage.
Magazine Street, corner Putnam Avenue.
Magazine Street, corner Warland.
Magazine Street, corner Auburn.
Magazine Street, corner Park.
Magazine Street, corner Upton.
Magazine Street, opposite Hamilton.
Magazine Street, opposite Allston (post).
Magazine Street, corner Florence.
Magazine Street, corner Green (post).
Main Street, corner Harrison (post).
Main Street, corner Columbia.
Main Street, corner Winsor.
Main Street, corner Norfolk.
Main Street, junction Austin.
Main Street, north side, opposite Kennedy's bakery.
Main Street, corner Washington.
Main Street, corner Brewery.
Main Street, corner Portland.
Osborn Street, corner State (post).
Osborn Street, corner Main (post).
Pacific Street, corner Sydney.
Pacific Street, near Albany.
Pearl Street, corner Lake.
Pearl Street, corner Allston (post).
Pearl Street, corner Putnam Avenue.
Pearl Street, corner Decatur.
Pearl Street, corner Auburn.
Pleasant Street, corner Florence (post).
Pleasant Street, corner Upton.
Pleasant Street, corner Somerset.
Pleasant Street, corner Park.
Pleasant Street, corner Prince.
Pleasant Street, corner Pleasant Place (post).
Pleasant Street, corner Chestnut.
Pleasant Street, corner Franklin (post).
Portland Street, corner Main (post).
Putnam Avenue, opposite Ballard Place (post).
Putnam Avenue, near River Street (post).
Putnam Avenue, corner River Street (post).
Putnam Avenue, corner Walnut Court (post).
Putnam Avenue, corner Pleasant (post).
Putnam Avenue, between River and Pleasant Streets (post).
River Street, corner Franklin.
River Street, opposite Cottage.
River Street, opposite Laurel.
River Street, corner Blackstone.
River Street, opposite Fairmont.
School Street, corner Clark.
School Street, corner Portland (post).
School Street, corner Clark (post).
School Street, corner Moore (post).
Soden Street, corner Western Avenue.
Somerset Street, corner Andrew (post).
State Street, opposite Village (post).
State Street, near Howe's Factory (post).
Sydney Street, corner Allston.
Sydney Street, corner Putnam Avenue.
Sydney Street, corner Chestnut.
Sydney Street, corner Front (post).
Sydney Street, corner Green (post).
Washington Street, corner Brewery (post).
Washington Street, corner Clark.
Washington Street, corner Portland (post).
Washington Street, corner Moore (post).
Waverley Street, opposite Willard's.
Western Avenue, corner Howard Street.
Western Avenue, corner Kinnaird Street.
Western Avenue, corner Jay Street.
William Street, between Magazine and River Streets (post).

Located in Ward Five.

Arlington Street, 500 feet from North Avenue (post).
Beech Street, east side, 20 feet from Orchard.
Belmont Street, corner Montgomery (post).
Cedar Street, corner Spruce.

Cedar Street, opposite Norris.
Cedar Street, opposite hotel.
Coggswell Avenue, corner Mead Street.
Concord Avenue, corner Madison Street.
Concord Avenue, opposite Bond Street.
Concord Avenue, corner Walden Street.
Concord Avenue, opposite Eames estate (post).
Crescent Street, corner Sacramento (post).
Donnell Street, corner Garden.
Dublin Street, 525 feet from Spruce.
Dublin Street, 620 feet from Walden.
Dublin Street, corner Walden.
Dublin Street, corner Bolton.
Dublin Street, corner Railroad.
Fairfield Street, opposite Mr. Whitney's.
Forest Street, corner Frost.
Garden Court, corner Dublin.
Garden Street, opposite Bond.
Harris Street, corner Frost (post).
Harvey Street, opposite Montgomery.
Hollis Street, in the elbow.
Hubbard Avenue, opposite brick block.
Hubbard Avenue, corner Raymond Street.
Lambert Avenue, corner Walnut Avenue (post).
Lambert Avenue, corner North Avenue [(post).
Linnæan Street, corner Avon.
Linnæan Street, corner Bowdoin.
Linnæan Street, corner Raymond.
Milk Street, corner White.
Milk Street, near Somerville line (post).
Montgomery Street, 300 feet from Harvey (post).
Mt. Vernon Street, corner North Avenue (post).
North Avenue, near railroad bridge.
North Avenue, corner Coggswell Avenue.
North Avenue, corner Allen Street.
North Avenue, corner Dover Street.
North Avenue, 300 feet west of tannery.
North Avenue, corner Sacramento Street.
North Avenne, opposite Linnæan Street.
North Avenue, corner Chester Street.
North Avenue, corner Arlington Street.
North Avenue, corner Rice Street.
North Avenue, corner Cedar Street.
North Avenue, opposite tannery.
North Avenue, near Walcott Richardson's gate.
North Avenue, corner Beech.
North Avenue, corner Frank Street (post).
North Avenue, corner Day Street.
North Avenue, near Blake's blacksmith shop (post).
Norton Street, midway.
Orchard Street, near Davenport (post).
Orchard Street, opposite Tenney Court.
Oxford Street, corner Forest.
Oxford Street, opposite Eustis Court.
Oxford Street, corner Sacramento.
Pemberton Street, 500 feet from North Avenue (post).
Pemberton Street, corner Fairfield (post).
Raymond Street, south side (2), near Mr. Dresser's estate.
Reed Street, 250 feet from Harvey.
Reed Street, opposite school-house.
Rice Street, opposite L. L. Cushing's.
Richdale Avenue, corner Raymond Street.
Richdale Avenue, near Raymond Street (post).
Roseland Street, corner Frost.
Shepard Street, corner Avon.
Spruce Street, corner Hollis.
Spruce Street, corner Jackson (post).
Spruce Street, corner Reed.
Spruce Street, corner Montgomery.
Spruce Street, corner North Avenue.
Spruce Street, opposite school-house.
Spruce Street, corner Clay.
Spruce Street, corner Clifton.
Tannery Street (3), between North Avenue and Almshouse (posts).
Tuttle Street, opposite Ladd's barn.
Walden Street, corner Mead.
Walden Street, corner Hubbard Avenue.
Wallace Street, in the elbow.
Washington Avenue, corner Dexter.
Washington Avenue, corner Foxcroft Street.
Wyeth Street, corner Garden.

RESERVOIRS.

Located in Ward One.

Bow Street, centre of square.
Brighton Street, corner Eliot.
Cambridge Street, corner Felton.
College Yard.
Garden Street, north end of Appian Way.
Junction Garden Street and Concord Avenue, opposite Arsenal.
Mt. Auburn Street, opposite the church.

Located in Ward Two.

Broadway, head of Tremont.
Cambridge Street, corner Webster Avenue.
Essex Street, corner Austin.
Harvard Street, opposite burial-ground.
Harvard Street, head of Cherry.
Harvard Street, corner Davis.
Harvard Street, corner Prospect.
Main Street, junction Broadway.
Norfolk Street, midway between Broadway and Hampshire.
Prospect Street, 175 feet north of Broadway.
Washington Street, corner Cherry.

Located in Ward Three.

Cambridge Street, 70 feet east of Third.
Gore Street, corner North Third.
Junction Bridge and Gore Streets.
New England Glass Company's yard.
Otis Street, corner Fourth.
Thorndike Street, corner Third.
Under New England Glass Company's building.
Under Lowell Railroad machine shop.

Located in Ward Four.

Junction Western Avenue and Pleasant Street.
Lafayette Square (2).
Main Street, corner Austin.
Main Street, corner Brookline.
Main Street, junction Western Avenue and River Street.
Pearl Street, corner Franklin.
School Street, corner Cherry.

Located in Ward Five.

North Avenue, near Engine House No. 4.

CAMBRIDGE FIRE-ALARM TELEGRAPH.

LOCATION OF BOXES.

2. Prison Point St., cor. Bridge.
4. Gore, J. P. Squire's building.
6. Third, cor. Broadway.
7. Third, cor. Bent.
8. Thorndike, cor. Third.
9. Cambridge, near First.
12. Winter, cor. Third.
12. North, cor. Water (duplicate).
13. Fourth, Engine House No. 3.
14. Sixth, cor. Cambridge.
15. Vine, cor. Fifth.
16. Broadway, Greely's mill.
16. Potter, rubber factory (duplicate).
17. Washington, cor. Brewery.
21. Sydney, cor. Allston.
23. Pearl, cor. Auburn.
24. Brookline, cor. Valentine.
25. Main and Front (junction).
26. Main, cor. Osborn.
27. Clark, cor. Harvard.
28. Broadway, opp. Page's box factory.
29. Pine, cor. Washington.
31. Cambridge, cor. Harding.
32. Columbia, cor. Cambridge.
34. Hampshire, cor. Columbia.
35. Harvard, cor. Norfolk.
36. Main, cor. Western Ave.
37. Pleasant, cor. River (junction).
38. Magazine, cor. Lake.
39. Magazine, cor. Chestnut.
41. Pleasant, cor. Fairmont.
42. Blackstone, opp. Riverside Press.
43. Banks, cor. Flagg.
45. Franklin, near Soden.
46. Main, cor. Hancock.
47. Broadway, cor. Antrim.
48. Cambridge, cor. Hampshire (junction).
49. Cambridge, cor. Baldwin.
51. Broadway, cor. Ellery.
52. Mt. Auburn and Main (junction).
53. Mt. Auburn, cor. Holyoke Place.
54. Cambridge, Memorial Hall (south side).
56. Kirkland, cor. Sumner.
57. Oxford, cor. Mellen.
59. Harvard Square, Ramsay's drug store.
61. Brattle Square, City Building.
62. Mt. Auburn, cor. Hilliard.
63. Brattle, cor. Mason (junction).
64. Chauncy, cor. Garden.
65. North Ave., cor. Shepard.
68. North Ave., near railroad bridge.
69. North Ave., Engine House No. 4.
71. North Avenue, near tannery.
72. Cedar, hotel building.
73. Spruce, near Bay State brick-yard.
74. Dublin, cor. Railroad.
75. Walden, cor. Raymond.
78. Concord Ave., cor. Sparks.
79. Brattle, cor. Sparks.
82. Brattle, cor. Elmwood Ave.
83. Mt. Auburn, near railroad stable.
87. Lake View Ave., near junction Concord Ave.
91. North Ave., Union Railway car house.
92. Locust, cor. Cushing.
125. Green, F. A. Kennedy's cracker bakery.

INSTRUCTIONS TO KEY HOLDERS.

Alarms to be given from the box nearest the location of the fire.

Don't give an alarm for a fire seen at a distance, unless assistance is called for.

To give an alarm, open the door, pull the hook to the bottom of the slot once, and let go. Each box contains a small bell, which, if heard before you pull, indicates that an

alarm has been previously given; and by listening at the box, you will learn the number of the box from which the alarm was given: but in no case will you pull the box while the alarm is striking. After giving the alarm, remain at the box, so as to direct the firemen to the fire. Be sure that you lock the box before leaving it.

Citizens are requested to inform themselves where keys to the signal boxes are kept, signs suitably inscribed being placed over each box, giving the requisite information.

INSTRUCTIONS TO FIREMEN.

First alarm will be given by striking *three* or more rounds.

Second alarm will be given by repeating the first.

General alarm will be given by striking *three blows* on the gongs and bells.

In cases where hook-and-ladder companies only are wanted, the call will be given by striking *five blows*.

Companies not required to respond to first or second alarms will be notified of the extinguishment of a fire by *two blows* on the gongs, that their services will not be needed and that orders have been given to "make up." Should an alarm be given from any box while a portion of the department is engaged at a fire, the apparatus not in service will respond.

REPORT

OF THE

SUPERINTENDENT OF STREETS.

To the Honorable City Council of the City of Cambridge:—

GENTLEMEN, — I herewith submit for your consideration a report of operations in, and matters relating to, the Street Department for the financial year ending Nov. 30, 1881 : —

The appropriation for the year was . .	$60,000 00	
Estimated revenue	200 00	
Transferred from West Boston, Craigie's, and Prison Point Bridges	1,811 89	
		$62,011 89
Expended as follows: —		
Blankets	$64 00	
Directory	2 50	
Freight	54 10	
Glass	4 00	
Gas	117 11	
Gravel and sand	2,836 23	
Horse doctoring	97 05	
Hay, grain, and straw	4,236 47	
Horses	900 00	
Horse-shoeing	521 74	
Hardware	293 48	
Iron work and repairing carts	549 66	
Lumber and cement	746 13	
Oil	33 72	
Labor with men and teams	40,291 29	
Printing	5 50	
Repairing harnesses	215 57	
Rent of land	60 00	
Superintendent's salary	1,700 00	
Sign painting	31 00	
Sleigh	80 00	
Stone	8,402 46	
Stable supplies	94 15	
Amount carried forward	$61,336 16	

Amount brought forward	$61,336 16	
Tickets and fares	25 45	
Tools and repairing	407 97	
Water	237 31	
Stamps	5 00	
		$62,011 89

The streets of our city are in a generally good condition; but more money will have to be expended the coming year, as several new streets have been accepted which must be graded the coming season: an appropriation of $100,000 will be required next year.

The following streets have been accepted:—

Greenough Avenue.
Jay Street, River to Western Avenue.
Summer Street, Inman to Amory.
Lambert Avenue, North Avenue to sixty-seven feet westerly of Mt. Pleasant Street.

Appropriation for paving	$6,000 00	
Transferred from Health Department .	119 11	
" " Engineering	264 59	
" " Lighting Streets . . .	74 07	
		$6,457 77
Expended as follows:—		
Sand	$42 80	
Labor with men and teams	4,946 92	
Paving stones	682 67	
Bricks	364 00	
Flagging stones	408 12	
		6,444 51
Balance unexpended		$13 26

I desire to call your attention to Prison Point Street, which should be paved; and I would recommend that an appropriation of $6,000 be made for that purpose, and also that a small appropriation be made for paving a part of Main Street For general repairs, $8,000 will be needed for the coming year.

Appropriation for bridges	$2,500 00	
Transferred from Care and Repairs of Surrendered Estates	15 09	
Transferred from Pauper Department (House Offal)	4 07	
		$2,519 16

Expended as follows:—		
Lumber	$1,047 22	
Labor	1,435 02	
Iron work	28 61	
Hardware	7 00	
Oil	1 31	
		$2,519 16

The bridges are all in a good condition, with the exception of Brookline Bridge, which must be rebuilt above the piling. Several other bridges will need replanking, and I think that an appropriation of $5,500 will be needed for care and repair of bridges for the coming year.

Appropriation for watering streets	$9,000 00	
Estimated revenue	9,000 00	
	$18,000 00	
Transferred to Abatements and Discounts,	3,407 77	
		$14,592 23
Expended as follows:—		
Teaming	$14 00	
Labor and pipes	77 45	
Water for 1880	4,121 62	
Repairing carts	302 02	
Lumber	9 19	
Use of engines	320 00	
Stamp	5 00	
Hose	42 50	
Printing	3 50	
Labor with men and teams	9,696 95	
		$14,592 23
Appropriation for shade trees and public grounds	$3,000 00	
Transferred to State Aid	1,006 35	
		$1,993 65
Expended as follows:—		
Labor	$1,013 67	
Horse-shoeing	3 50	
Hardware	20 61	
Lumber	63 86	
Painting	78 25	
Repairing tools	87 37	
Repairing scale	32 01	
Gravel	62 45	
Coal tar	1 75	
Water	630 00	
		1,993 47
Balance unexpended		$0 18

Schedule of Property belonging to Street Department.

Utensils for work on streets	$650 00
25 horses	6,500 00
8 double harnesses	325 00
4 wagon harnesses	85 00
14 chain harnesses	275 00
10 saddles	175 00
33 collars	80 00
17 carts	1,700 00
1 caravan	85 00
1 set runners	65 00
1 plough	3 00
Stable furniture and supplies	40 00
11 snow ploughs	285 00
Stone crusher and engine	3,800 00
5 street rollers	1,500 00
7 sleds	500 00
1,500 bricks	18 00
400 yards cracked stone	900 00
Stone for cracking	60 00
Railroad track on Cambridge Street	400 00
4 express wagons	275 00
Lot of round and square paving stones	85 00
Lot of edge and flagging stones	100 00
22 watering carts	7,500 00
26 horse blankets	125 00
3 hand lawn mowers	25 00
1 horse lawn mower	50 00
2 pungs	125 00
	$25,731 00

Respectfully submitted,

B. W. WOODARD,

Superintendent of Streets.

REPORT

OF

THE CHIEF OF POLICE.

OFFICE OF THE CHIEF OF POLICE,
CAMBRIDGE, Dec. 21, 1881.

To the Honorable the Mayor and City Council:—

GENTLEMEN, — I have the honor to submit my fourth annual report of the doings of the Police Department for the year ending Nov. 30, 1881.

Whole number of arrests		1,432
Males	1,309	
Females	123	
Adults	991	
Minors	441	

Causes of Arrest.

Adultery	1
Attempt to commit rape	1
" " " suicide	1
Assault and battery	169
Assault, felonious	4
Assault, mutual	30
Assault on officers	27
Bastardy	9
Breaking and entering	36
Capias	5
Carrying concealed weapons	3
Common drunkards	23
Concealing mortgaged property	1
Cruelty to animals	2
Delirium tremens	5
Deserter	1
Disturbing the peace	61
Disturbing public meeting	4
Drunkenness	543
Embezzlement	3
Escaped prisoners	7

Extorting money		1
False pretences		6
Forgery		3
Fornication		3
Indecent exposure		1
Insane		22
Keeping disorderly houses		2
Keeping unlicensed dogs		4
Killing undomesticated birds		1
Larceny, simple		102
Larceny from a building		7
Larceny from the person		1
Lewd and lascivious persons		2
Malicious mischief		51
Misdemeanor		3
Peddling without license		8
Receiving stolen property		5
Refusing to assist officers		3
Safe keeping		7
Selling adulterated milk		2
Selling milk without license		1
Selling mortgaged property		2
Sodomy		2
Stubborn children		5
Surety of the peace		22
Suspicion		19
Truancy		13
Vagrancy		48
Violation city ordinances		80
Violation liquor law		27
Violation revenue law		1
Violation Sunday law		6
Wilful trespass		36
Number of lodgers	917	
Male	841	
Female	76	
Adults	875	
Minors	42	

Miscellaneous Business.

Accidents reported	132
Buildings found open and secured	131
Cases investigated	217
Dangerous buildings	1
Dangerous chimneys	1
Dead bodies found	9
Defective cesspools	37

Defective drains and vaults	31
Defective fire alarms and clocks	6
Defective gas pipes	8
Defective hydrants	7
Defective lamps	1
Defective streets and sidewalks	449
Defective water pipes	58
Disturbances suppressed	228
Extra duties done by officers	398
Fire alarms given	15
Fires extinguished without alarms	10
Intoxicated persons helped home	72
Lost children restored	174
Sick and injured persons assisted	48
Stray teams put up	60
Street obstructions removed	29
Nuisances reported	5
Water running to waste	32
Warrants, search for liquors	39

Value of property reported stolen	$5,840 40
Value of property recovered	1,807 52

City Property in Use by Police Department.

	Estimated Value.
60 badges	$90 00
55 badges for special officers	68 75
70 billies (short)	35 00
54 belts and billies for parade	54 00
15 buckets	7 50
2 book-cases	20 00
3 book-racks	3 00
4 bedsteads	16 00
Bedding and blankets	54 00
4 brushes	1 50
10 books	20 00
7 brooms	2 50
2 bureaus	3 00
1 boat and grapples	25 00
1 buggy	50 00
1 curry-comb and brush	75
7 clocks	60 00
73 chairs	67 00
1 coal hod	25
6 carpets	62 00
Amount carried forward	$640 25

Amount brought forward	$640 25
1 copying machine	12 00
10 desks	122 00
1 drop light	1 00
3 dust-pans	75
1 feather duster	1 50
2 horses	240 00
4 sets of harness	45 00
3 horse blankets	7 00
12 pairs handcuffs	20 00
2 hair mattresses	20 00
Hand hose	15 00
1 hat rack	50
1 hectograph	6 00
1 ice hatchet	25
27 lanterns	27 00
5 lounges	40 00
1 letter scale	75
2 pairs leg-irons	8 00
2 lamps	1 00
10 mirrors	18 00
6 mats	4 25
3 maps	2 00
5 oil cans	1 00
10 pistols	15 00
1 pitchfork and shovel	75
3 pairs insect bellows	1 50
1 police van (large)	200 00
1 police van (small)	250 00
1 pair runners	10 00
Ropes and stakes	100 00
3 robes	15 00
1 rubber blanket	1 00
6 slates	1 50
20 spittoons	8 00
1 sleigh	30 00
1 sofa	5 00
4 stretchers	8 00
3 saddles and trappings	50 00
1 safe	200 00
2 shovels	2 00
1 stove	5 00
Telephone line	325 00
27 tin dippers	1 75
25 towels	3 00
6 tables	24 00
Amount carried forward	$2,489 75

Amount brought forward	$2,489 75
3 umbrella stands	3 00
4 waste baskets	2 00
4 water coolers	5 00
6 water pails	1 50
1 wagon	75 00
1 wagon jack	1 00
1 wardrobe	10 00
Total estimated value	$2,587 25

Total cost of the department for the year: —

Appropriation and estimated revenue	$57,500 00

Expenditures.

For Burying animals	$2 25
Boat, care of	8 00
Buttons and straps	68 98
Carriage hire	12 00
Directories	14 50
Food for prisoners	63 17
Fuel	1,097 60
Gas	522 21
Hardware and tools	9 15
Hay, grain, and straw	215 57
Harnesses and repairs	73 12
Horses	355 00
Horse-shoeing	68 03
Horse boarding	209 77
Horse clipping	2 00
Policemen, services of	51,869 95
Printing and bill posting	22 00
Prisoners, transportation of	6 80
Repairs at stations	287 64
Repairs of vehicles	55 25
Repairs of telegraph	18 68
Salary of F. W. Hagar, Chief of Police	1,600 00
Serving warrant	1 00
Supplies at stations	189 80
Surgical attendance and medicines	17 78
Telephone	145 00
Travelling expenses	37 08
Water	41 00
	$57,013 33

Amount paid into treasury on account of		
Conveyance of prisoners	$12 76	
Court fees	3,755 74	
Sale of horses	210 00	
Use of ropes and stakes	9 00	
	$3,987 50	
Expenditures		$57,013 33
Receipts		3,987 50
Balance showing actual cost		$53,025 83

The police force consists at the present time of one chief, three captains of districts, one night captain, six sergeants, one detective, one court officer, and forty-four patrolmen.

The force is divided into three reliefs, as follows: The first consists of nine men, working from 4 A. M. until 12.30 P. M.; the second of twelve men, from 12.30 until 9 P. M.; and the night relief of twenty-three men, from 9 P. M. until 4 A. M. This relief is under the supervision of the night captain and two sergeants. While this division of the men works fairly during the short evenings of the summer months, the long evenings of the fall and winter bring with them frequent complaints of the disorderly conduct of young men and boys, who congregate on the street corners and other public places, and by their rude conduct and insulting remarks are a great annoyance to passers, particularly ladies. In my judgment, an increase should be made in the number of officers patrolling the streets during the evening. Until 9 P. M. there are but twelve officers on patrol duty throughout the entire city; and as their presence is required on the main thoroughfares and business centres, it necessarily leaves the other portions of the city without police protection. One of the most serious cases of house-breaking that has occurred during the year was recently made in the first district between the hours of 8 and 9 P. M. For a few weeks, five special officers were employed from 6 to 9 P. M. in addition to the regular patrol, and with good results; but the appropriation becoming nearly exhausted, they were withdrawn from duty.

I recommend a return to what is called the Boston system, of two night reliefs covering the time from 6 P. M. to 8 A. M., and a day relief from 8 A. M. until 6 P. M. This will require an addition of at least four men to the force. While I realize the necessity of economizing as far as possible in our current expenses, I believe that the increased expenditure required will add greatly to the safety and protection of our citizens. Early in the summer, two horses and equipments were purchased for mounted service in the first and second districts, in addition to the one already in use; and three officers were engaged in this duty during the months of July, August, and September. The result has been entirely satisfactory; for while a large number of our citizens were absent from the city and their houses vacant, but one case of housebreaking in those districts was reported, and in that case no property was taken from the premises. The protection to gardens and orchards was also increased, owing to the rapidity with which the mounted officers could move from place to place.

The detective work of the department has been performed in a satisfactory manner by the officer specially detailed for that service, aided by other members of the force as circumstances required.

As it is only by thorough discipline that the force can be kept up to a high standard of usefulness and efficiency, I have constantly endeavored to have it maintained; and I believe the department was never under better discipline or more united than at the present time.

Six cases of violation of the rules and regulations of the force were brought to the attention of the Committee on Police; and after careful investigation, penalties were imposed in each case. At convenient times the officers have been drilled in military movements, and they have also been examined as to their knowledge of the powers and duties of police officers, and proper instructions given them. During the year the department has lost one of its members by death, — Mr. Charles B. Jones, who had been afflicted with consumption and died on the fourth day of March. For more than three years previous to that time, he had performed the duties of a detective in an able and successful manner. Ready at all times to engage in

any duty required of him, and faithful in its performance, by his death the department has lost one of the best officers ever connected with it.

The telephone apparatus which connects the several station houses and City Hall has been in operation during the past year, and has proved very convenient and useful.

In the maintenance of discipline in the department, and in the enforcement of the statute laws and ordinances of the city, I have been heartily supported by the several captains and sergeants, without exception; and my thanks are due to all the members of the force for the prompt and cheerful manner in which they have obeyed my orders, and performed their various duties.

Respectfully submitted,

FREDERICK W. HAGAR,
Chief of Police.

REPORT

OF

THE SUPERINTENDENT OF LAMPS.

To the Honorable City Council of the City of Cambridge: —

THE undersigned respectfully submits his annual report of the department for lighting streets, for the year ending Nov. 30, 1881.

The amount appropriated for the current year was $20,500.

The amount expended was as follows: —

For Gas		$11,943 85
Care of lamps and lighting		5,870 95
Cambridge Gas Company, labor, pipe, and fittings		149 35
Kerosene		127 86
Matches		36 60
Alcohol		133 50
Repairs		375 02
Torches		39 78
Lamp-post cocks		123 30
Nipples and couplings		16 17
Burner tips		11 20
Printing		11 03
Gas tools and putty		9 20
Burners		14 55
Carriage hire, Committee on Lamps		6 00
Wicking		12 45
Carting		1 05
Sundries		7 60
Expense, lighting Belmont district		99 00
Superintendent's salary		350 00
		$19,338 46
Cash collected for damages to posts, and sale of old material, and paid into city treasury		28 94
Leaving the net expenditures for the year		$19,309 52
Balance of appropriation unexpended		1,161 54
		$20,500 00

The cost per lamp for the maintenance of the department for the year was $22.79.

The number of street lamps in the city is as follows : —

District 1	166	gas,	1	kerosene.
2	150	"	21	"
3	153	"	16	"
4	158	"	9	"
5	150	"	14	"
Belmont district			9	naphtha.
	777		70	
Total				847

The increase in the number of lamps since my last annual report has been nine, which were all put up at the expense of the petitioners for the location.

The street lamps during the year have been burned on 279 nights, or 1,285,144 hours, an average of 1,537¼ hours each.

The average cost per night for each lamp burning gas was 5½ cents ; for each lamp burning kerosene, 1½ cents per night.

Many complaints continue to be made of the darkness of the streets on the nights when it is presumed the moon will give sufficient light. This inconvenience is inherent in the system, which was adopted on the establishment of the lamp department, September, 1856, and has been continued to the present time, of lighting the lamps by the changes of the moon ; and the only remedy is the measure I have heretofore recommended, and again renew (the plan pursued by the city authorities of Boston), of lighting the lamps at sunset and burning them all night. We should then have a certainty that under all changes of weather the streets would be well lighted and safe for travelling, should have a safeguard against burglary and accidents, —which are more liable to occur under the present system, — and should satisfy the expressed desire of the citizens for more light. In this connection I would call the attention of the City Council to a statement in my last annual report : —

" We have in the city of Cambridge eighty-five miles of streets, exclusive of the Belmont district, and 838 street lamps; this gives us an average of one lamp to about 536 feet.

" A street to be properly lighted should have the lamps not more than 180 to 200 feet apart. In the business streets of Boston and in the thickly

settled districts, the street lamps are about 180 feet apart, in other parts of the city from 180 to 200 feet; and lamps are erected on petition, and at the expense of the city. In our own city the rule was established by the City Council in 1852, ' That whenever suitable iron posts and lanterns are erected at such points on any streets in the city as the mayor and aldermen may designate, the mayor is authorized to cause such lamps to be lighted at the expense of the city.' This rule has been followed substantially to the present time. The result has been that in the business streets of the city, and other streets occupied by resident owners of real estate, the streets are now well lighted; while large portions of the city, inhabited mostly by poorer people, who are either unable or unwilling to incur the expense of posts and lanterns, have been left in darkness; and I respectfully suggest that the matter is worthy of the attention and consideration of the City Council. In Ward Five,— the district included within the bounds of North Avenue, Walden Street, Concord Avenue, and Belmont and Arlington line, — about two thirds of the whole ward is but partially provided with street lamps, there being only eight in the district named. Two other localities in the city are in a similar condition. Ward One, on one of its main avenues, Brattle Street from Lake View Avenue to the old line of Belmont, — a distance of nearly half a mile, sparsely populated and thickly bordered with trees nearly all the way, — is entirely destitute of street lamps. This street is the main avenue through our city to Belmont; and the locality named, I think, is at night the darkest and most dangerous place in the city. Several highway robberies have occurred there, and foot travellers seek the middle of the street rather than the sidewalks for safety at night. It should be remembered that ' a lamp-post is a policeman.' I have been requested to call the attention of the City Council to this locality, and ask that measures be taken for lighting this district, not only for the public benefit, but more particularly for the benefit of the citizens of the recently annexed territory."

Our own citizens, and other travellers through the city by night, are entitled to safe transit from one section to another. This can be secured by the vigilance of the police and well-lighted streets; but when a locality is in the condition of the one last named, there is danger of collisions on the road, and the dense darkness which prevails at night makes it very unsafe for foot travelling. The necessity for more light is thus apparent.

As it is desirable that the streets of the city should be better lighted than at present, the following plans are submitted for the consideration of the City Council: —

First. Light all the street lamps in the city at sunset and extinguish them at daylight on 317 nights of the year. This

would leave four nights in each month when the moon is at or near the full, when no lights would be needed unless the moon is obscured by clouds. This plan would require no extra expense, except for the extra amount of gas used. Under the present system, the estimated cost of the gas for twelve months is $13,000. Under the plan proposed, the estimated cost of gas for twelve months is $22,167.80. If this plan should be adopted, it would give the men employed every night in the year for rest and sleep, and afford them an opportunity of securing other employment in the daytime, but would necessarily involve a readjustment of the compensation now allowed.

Second. Light the gas lamps now on the main avenues — viz., 511 — at sunset and extinguish them at daylight on 317 nights of the year; light the remaining 327 lamps the same number of nights at sunset and extinguish them at twelve o'clock. This plan would continue the present price of labor. The estimated cost of gas required for twelve months is

For the all-night lamps	$14,579 75
For the twelve-o'clock lamps	4,743 09
Total	$19,322 84

As three months of the financial year will probably have passed before the measures proposed can be considered by the City Council, and the estimates are for the whole year, one quarter of the cost for gas can be deducted from the above estimates.

The plan first proposed would require an appropriation for the maintenance of the department for twelve months of.	$29,156 80
Under plan second, for twelve months	27,210 91
Under the present system, for twelve months . . .	20,889 00

The increase in the number of lamps since I took charge of the department has been 119, and the number of permanent men employed has been increased from 6 to 11. The lamps in the Belmont district have also been annexed to the department, thereby requiring a large increase of material for the use of the men, and a closer and more laborious supervision of the department. The expenses in the mean time have not increased. By the last annual report of my predecessor for the year 1875, the

total number of lamps reported was 728, and the total expenses of the department were $20,753.76, an expense per year for each lamp of $28.50. The superintendent's salary at that time was $400 per year. The total number of lamps at the present time is 847, and the net expenditure for the year is $19,309.52, an expense for each lamp of $22.79 ; and I would call the attention of the City Council to the fact that had the same ratio of expenses been carried out this year, the total expenditures would have been $24,139.50, the difference in favor of the city being $4,829.98. In January, 1879, the salary of the superintendent was reduced to $350 per year. I respectfully suggest that the compensation is not sufficient for the faithful performance of the duties of the office, and ask that a reasonable increase be granted.

B. F. NOURSE,
Superintendent of Lamps.

REPORT

OF THE

SEALER OF WEIGHTS AND MEASURES.

To his Honor the Mayor and the Board of Aldermen of the City of Cambridge:—

GENTLEMEN, — In the performance of my duties I have visited, during the year ending Nov. 30, 1881, 404 places of business, and have

Sealed 838 scales.	Adjusted 102.	
Sealed 3,521 weights.	Adjusted 221.	Condemned 7.
Sealed 170 dry measures.	Adjusted 57.	Condemned 6.
Sealed 264 liquid measures.	Adjusted 5.	Condemned 4.
Sealed 4 yardsticks.		

The city scales throughout the city have been repaired, sealed, and adjusted; and work brought to the office during the year has been attended to, for which no fee has been charged.

The fees collected, amounting to $316.38, have been paid into the city treasury.

State property in possession of the sealer: One balance; one set avoirdupois weights; one set dry measures; one set liquid measures; one brass yardstick.

City property in possession of the sealer: One ton of iron weights; one test scale and box; one set brass weights in box; iron weights, one 25-pound, two 10-pound, and one 5-pound; lot of stamps and tools for sealing and adjusting.

B. F. NOURSE,

Sealer of Weights and Measures.

REPORT

OF THE

MILK INSPECTOR.

To his Honor the Mayor and the Board of Aldermen of the City of Cambridge:—

Gentlemen, — In accordance with my duty as milk inspector, I herewith submit my second annual report.

This year has witnessed a radical improvement in the quality of milk sold to our people, particularly that which is usually sold in stores. These places heretofore have been the depots for all the poor qualities, and for skimmed milk, which accumulated with the dealers after the cream had been removed; it was usually salted and colored and furnished to the stores at low rates, and sold to regular customers who bought other goods.

The new law passed last year particularly defines the liability of stores and others selling such an article, without having the cans branded "skimmed milk" and their contents sold for what it really is. My visits to the stores early in the year and the early calls made on milkmen had a salutary influence in regulating and placing this trade in the proper channels required by the law; the result was, the stores paid a better price, got a better article, and milk sold in stores to-day is considered among the goods that pay a profit, which has not been the case for years. The family supply has been of an unusually good quality, and few complaints have been made, although several visits have been made to various sections of the city, by invitation of citizens, to examine the quality of the milk left at their residences. Some few samples were taken and examined, the principal grievance being the age of the article left; and some from cans that were improperly cleansed. An explanation of the cause and a report to the dealer from the consumer has in all cases

remedied the evil. One or two cases came under my notice from families that were supplied by one cow's milk; the milk was of a reddish color, and a red ropy sediment formed. On further examination the milk showed a large percentage of cream, and the specific gravity was fully up to standard; but the milk showed unmistakable signs of a disease known as "garget," which is an inflammation of the lymphatic glands in the udder of cows. I requested the parties to stop the consumption of such an article, and to send the dealer to me; upon learning the facts in the case he discontinued the delivery of milk of the cow thus affected until a complete cure was assured. There have been no prosecutions this year: it was deemed prudent to move slowly and surely. Moral suasion in most cases had a healthy influence where an article was found not quite up to standard. The reason for delaying prosecution was to await the decision of some cases in Boston, which had been carried up to the Supreme Court to test certain points in the new law, and at the same time to save the expense of litigation and analysis in cases which would be appealed, subject to the result attained by the decisions above referred to. The appealed case of Charles F. Smith came before the Superior Court in February last and, owing to a technicality in the wording of the indictment, the case was not sustained. The case was closely watched by the trade, and although it ended contrary to expectation, it had a powerful effect among the retailers in stores, as it was an expensive victory, gained by error and not from want of positive proof of the result of the analysis of the sample taken.

Price of Milk.

The price of milk at the railroad was during the summer months thirty cents per can; and for the winter months, commencing Oct. 1, thirty-seven cents. The stores were supplied in the summer at thirty-five to thirty-eight cents, and in the winter at from forty-three to forty-five cents. The retail price to families was six to eight cents, while the store price for the same time was four to six cents. A few stores only sold at the former figure; the quality was uniformly good: and on inquiry I found they were supplied by some of the contractors at less prices than the regular milkmen were charging; which

fact caused general complaint among the dealers, who believed it was a gross injury to their trade in the immediate vicinity of these stores, as well as establishing a bad precedent by those who were expected to protect the interests of their regular patrons at least.

The milk supply was abundant till July 1, and since then it has been, to say the least, meagre; and now the dealers as a general rule cannot get a full supply, — the principal cause of this being a dry season and the advanced price of grain and feed, in consequence of which persons in the city limits and vicinity who made the raising of milk a business have in many cases discontinued it and sold their stock, bringing a demand upon the dealers which they did not anticipate.

The whole number of wholesale dealers, who are required to license annually, is this year 252, and the stores which had not previously sold number 45; 297 in all; from these were received fifty cents each, making $148.50 received during the year as fees. During the year, 431 visits have been made to stores and dealers, and one or more samples examined and tested. The office has been freely visited by consumers seeking information, which is always freely and cheerfully given. I will again refer to the necessity of procuring a small portable machine for the use of the office, and will quote from the report of the Boston inspector: "It is a very important instrument, for it enables us in ten minutes to tell the cream quality of the milk, which, with gravity and other tests, practically settles the quality of any specimen of milk," without resorting to the expense of analysis.

Oleomargarine.

Early in the year, the present State Legislature passed a law governing and regulating the sale of the above-named article, which may be found in the Laws and Resolves of 1881, Chap. 292. The Act imposed upon the milk inspectors throughout the State the duty of prosecuting on complaint of any person who produces satisfactory evidence on which to sustain the same. During the year, I have made special investigation in relation to the sale of this article, and found it for sale at

many of our stores, and in most cases sold for genuine butter and at similar prices. They give as a reason for so doing that they make a larger profit, and the article is of so good a quality that there is no cause for suspicion on the part of consumers; and again, if they offered it for what it really is they could not sell it at all, on account of the existing prejudice against it. In no one case have I been able to learn that it has been sold (except in whole packages) according to the statute, which says in reference to retailers: —

"And in case of retail sales of said article not in the original packages, the seller shall attach to each package so sold, and deliver with said package to the purchaser, a label or wrapper bearing conspicuously upon the outside of such package the words 'Adulterated Butter' or the word 'Oleomargarine,' in printed letters of plain Roman type not less than one half inch in length."

Several complaints have been made in Boston against retailers for violation of the law, the parties have been indicted by the grand jury, and are now awaiting trial. The result is looked for anxiously by the trade, who will be obliged to govern themselves accordingly. More legislation is advised, providing for the thorough inspection of the article as a means of protection to the consumers.

The article known as oleomargarine is purchased at from fifteen to eighteen cents per pound by the trade, and should be sold at a reasonable profit, instead of which I have been informed of retailers getting thirty to thirty-five cents a pound for it, selling it under the guise of "dairy butter"; thereby deceiving their customers in the article bought, by misrepresentation, and to add still further to the deceit, actually swindling them out of from fifteen to twenty cents per pound.

It is here where the great injury is done; and it is a gross one indeed, as the consumer is hoodwinked into buying a different article from what he expects, and the dealer plays the part of a swindler for the profit he gains. The article is in itself a good counterfeit of genuine butter, and is fast driving the demand for poorer grades of butter out of the market; but its sale must be closely restricted to insure protection against fraud.

Pure butter made from cream (as a fact of record by eminent chemists) contains not less than five per cent of soluble fat (but will average six and one half per cent), and not more than ninety per cent of insoluble fatty acids. Less than the above of soluble or more of insoluble matter conclusively shows the article to be adulterated.

There has been no appropriation made for the duties incumbent on this department, which are necessary to a proper execution of the law; and although I have given the business a great deal of service during the year, I think it will be necessary to make some provision for the coming year, as the duties, I am confident, will be fully equal to, if not more than, those of the milk inspection.

Respectfully submitted,

JOHN H. FARRELL,
Milk Inspector.

REPORT

OF THE

INSPECTOR OF VINEGAR.

To his Honor the Mayor and the Board of Aldermen of the City of Cambridge: —

Gentlemen, — The vinegar law, passed last year and appended to my former report, had a good influence on the Eastern markets, which were formerly the grand depots for the dangerous compounds from Western distilleries; and even now I learn that quantities are surreptitiously shipped under false brands, and again sold to the retailers under the guise of cider vinegar. It is articles of this sort that need looking after; they usually find their way into the smaller stores, where cheap goods are sold. During the year I have made special inspection among a certain class of dealers, where I had reason to believe a poor article was sold; and although my chief aim was to find the presence of sulphuric acid, I am happy to report I found only a few cases that excited suspicion: but I found large quantities of miserable vinegar made from poor acetic acid, colored and flavored, and selling at from twelve to fifteen cents per gallon at retail. In cases of this sort I always advise the sellers of the nature of the article they are selling, and call their attention to the law; and have found since, in nearly all cases, a better article was sold. Parties of this class need vigilant watching, as the profit is much larger on the poor article, and hence the reason for dealing in it in preference.

So great has been the demand for sanitary legislation in regard to this article that the States of New York, New Jersey, Maine, and Illinois have adopted laws in relation to vinegar similar to that of Massachusetts, and made ample provision for its thorough inspection and the punishment of all violators of the law; and in this connection I will state that petitions for the

inspection of all articles of food have been presented to our Legislature, and also by the National Board of Health to the general government at Washington, which now has the matter under consideration for national law.

With the addition of more stringent legislation, which is expected the coming year, it is hoped that the market will be purged of the poorer grades above referred to; and if so, more healthful results are sure to follow.

Thanking you, gentlemen, for the uniform courtesy extended to me, and all citizens for kindly aiding me in this department, this report is respectfully submitted.

JOHN H. FARRELL,
Vinegar Inspector.

CAMBRIDGE, NOV. 30, 1881.

REPORT

OF

THE CITY ENGINEER.

OFFICE OF THE CITY ENGINEER,
CITY HALL, CAMBRIDGEPORT, Dec. 14, 1881.

To the Honorable the City Council:—

GENTLEMEN, — The City Engineer herewith presents a report of the operations and expenses of the departments of Engineering and Sewers for the year ending Nov. 30, 1881.

Streets.

Streets have been laid out and accepted on the usual conditions, as shown in the following table; the most important being Lambert Avenue, which has been extended through land of Whitney and others to Mt. Pleasant Street, thus opening up a territory long in need of an outlet in the direction of "Porter's Station." The further extension of this avenue to Raymond and Garden Streets is expected in the near future. The usual demand for lines and grades of streets, and other work, has been met as required by the Street Department. Six plans have been filed by the Union Railway Company, and thirty-eight by the Charles River Railway Company, showing the locations granted by the city government during this year.

Streets accepted during the Year 1881.

STREET.					PLAN.		Accepted.
Name.	From	To	Length in feet.	Width in feet.	Date.	By	
Greenough Avenue..	Highland Avenue..	Ellsworth Avenue..	306.34	40	Oct. 25, 1880.	A. Hodges....	May 5, 1881.
Summer Street.....	Inman	Amory	249.08	30	May 18, 1881.	E. F. Bowker .	Sept. 14, 1881.
Lambert Avenue....	North Avenue	Mt. Pleasant Street.	1,537.60	50	Oct. 26, 1881.	City Engineer.	Nov. 11, 1881.
Jay Street	River Street	Western Avenue ...	404.42	40	Sept. 20, 1881.	A. Hodges....	Dec. 6, 1881.

Bridges.

The bridges maintained by the city are generally in good condition. They have required scarcely more than the usual repairs or replanking during the year. They will probably require no extensive repairs the coming year, with the exception of Brookline Bridge, to which reference was made last year. The four-inch plank is still in fair condition. The bridge should be rebuilt above the piling early in the coming season.

A petition has been presented by the business men on and near Broad Canal, asking that the draw of the Third Street Bridge may be widened. This would be a desirable improvement, and would allow a larger class of vessels to pass up the canal.

Mill Pond.

Considerable progress has been made in filling the mill pond purchased last year. The flats have been covered with water most of the time, and but little complaint has been made; the general condition of the pond has been much improved.

Sewers.

The demand for new sewers and work required on existing ones has been quite large. The total length of sewers in the city being 63.357 miles. The following table shows the details of new sewers constructed.

Sewers Constructed

BETWEEN DEC. 1, 1880, AND DEC. 5, 1881.

LOCATION.			CONSTRUCTION.						Total cost.
Street.	From	To	Built by	Material.	Size in inches.	Man-holes.	Inlets.	Length in feet.	
Appleton	Highland	Northerly	City Engineer	Akron Pipe	12	2	20	335.2	$406 22
Athens Place	Mt. Auburn	End of place	O. P. Roberts	Portland Pipe	10	2	22	297.0	351 82
Brattle	Ash	Westerly	City Engineer	Portland Pipe	12	2	10	190.0	347 44
Bristol	Webster Avenue.	Easterly	City Engineer	Portland Pipe	12	2	9	198.0	226 24
Channing	Brattle	Southerly	O. P. Roberts	Portland Pipe	12	2	14	267.5	336 20
Cottage	Magazine	Westerly	T. Murphy	Akron Pipe	12	1	7	135.2	187 28
Elm	Harvard	Near Broadway	Samuel McCulloch.	Portland Pipe	10	2	12	257.6	278 25
Farwell Place	End of sewer	End of Place	City Engineer	Portland Pipe	12	1	4	38.5	86 21
Fairmont Avenue	Somerset	Fairmont Street	Samuel McCulloch.	Portland Pipe	10	3	32	380.3	470 50
Harris and Frost	End of sewer	Near Forest	City Engineer	Portland Pipe	8	2	17	259.0	223 25
Hawthorn	End of sewer	Near Brattle	City Engineer	Portland Pipe	10	1	5	77.7	99 42
Hastings Square	End of sewer	Southerly	City Engineer	Portland Pipe	10	0	2	50.0	42 40
Highland	Appleton	Westerly	City Engineer	Akron Pipe	12	1	20	360.0	424 66
Linnæan	Bowdoin	Easterly	T. Murphy	Akron Pipe	12 & 10	3	30	458.0	442 88
Main, Front, Sydney, and Pilgrim	Columbia	Westerly, in Pilgrim.	City Engineer	Brick	24 × 30	8	114	1,551.0	3,528 87
Magazine	Magazine Court	Southerly	City Engineer	Portland Pipe	12	1	6	131.5	224 51
Magazine	Franklin	Northerly	City Engineer	Portland Pipe	10	1	7	100.0	109 35
Murdock	Hampshire	Gardner	City Engineer	Portland Pipe	10	2	28	393.4	338 70
Norris	North Avenue	Southwesterly	City Engineer	Portland Pipe	12	2	14	225.0	367 31
Putnam Avenue	Waverly	Southwesterly	T. Murphy	Akron Pipe	12 & 15	0	13	218.6	220 62
Putnam Avenue and River Street	End of sewer	Blackstone	Matthew Corkery	Akron Pipe	12	2	18	261.3	356 74
Prince	Magazine	Westerly	City Engineer	Portland Pipe	12	2	10	204.8	278 54
Third	Binney	Southerly	Samuel McCulloch.	Portland Pipe	15	1	30	313.5	481 10
*Vine	Second	Westerly	City Engineer	Portland Pipe	12	0	8	125.3	277 75
Watson	Brookline	Salem	City Engineer	Portland Pipe	12	3	27	390.0	438 54
						46	479	7,218.4	$10,545 30

Financial year closes Nov. 30, 1881. Cost of November and December sewers is included in this statement.
*Pile foundation.

For a number of years, numerous complaints have been made by the Board of Health of the city of Somerville, and people residing on or near its borders, in relation to an alleged nuisance in Alewife Brook. Feeling that there was just ground for complaint, and also that the brook is in some degree a source of danger to our water supply, the Committee on Sewers instructed the City Engineer to prepare a plan for relief. After due consideration the following plan was submitted: — To build a small intercepting sewer along the margin of Alewife Brook, large enough to receive all the ordinary drainage, provided with suitable storm-water overflows, discharging into the brook; the ordinary flow to be received in a reservoir, to be located on the City Farm; from this reservoir to be pumped to an elevation sufficient to discharge it into the Bridge Street sewer as extended to Newbury Street, in Somerville, about 1,200 feet distant from the proposed reservoir, and about 400 feet in Somerville. Committees were appointed by each city, consisting of the mayors and delegations from each branch of the governments; the plan was thoroughly discussed, and approved. The terms proposed by the Somerville committee were accepted as offered by them, though in some respects considered onerous by Cambridge.

Application to the Legislature was made by the city, for an Act to enable the work to be carried out. The bill was prepared by the City Solicitors of the two cities, and with but slight opposition was passed. The Act was such as to require acceptance by both city governments; it was submitted to, and received the unanimous approval of, both branches of the city government of Cambridge, and with but slight opposition of the Board of Aldermen of Somerville. For reasons best known to themselves, the acceptance was refused by the Common Council; and thus was defeated a plan which had the approval of the engineers, the committees, the City Boards of Health, and others fully acquainted with the situation.

The sewage emptying into Goff's Cove has been diverted into the Main Street sewer, as recommended in my last report, which is now in excellent working order; storm overflows have been provided at the old outlets, which afford relief in case of heavy rains.

Some 2,000 cubic yards of material have been removed by dredging from near the mouth of the Bridge Street sewer; this was taken to the dumping ground at "Hangman's Island," in Boston Harbor. The accumulations under the bridge and wharves near by were washed out by a powerful stream of water forced through hose from a steam fire engine. This work was thoroughly done; but the amount of deposit delivered by this sewer is very great, and this or some other plan will have to be repeated soon. The flushing gate has been used effectively, and the sewer is for most of its length in good condition.

The drainage in the vicinity of First, Otis, and Thorndike Streets has been a source of much complaint; the existing sewers are in bad condition, having broken and settled in many places. Temporary relief has been given by laying small sewers from some of the buildings which were suffering most for drainage to points in the old sewer which were unobstructed. It is recommended that the whole system here be rebuilt in a thorough manner, and carried into the Bridge Street sewer, providing for these sewers and those now discharging into the Charles Street outlet, which will before many years be cut off by filling now in progress. The plan here proposed is the same as that proposed in 1876.

Much annoyance and inconvenience is still experienced in North Avenue and Shepard Street Districts. Alternative plans are proposed as follows: First, by extending the Murray Street sewer through Brattle and Harvard Squares, and through North Avenue to a point near Waterhouse Street, there joining the old sewer; or second, by enlarging the outlet sewer at Bath Street, thence extending through Hawthorn Street, through private lands west of the Episcopal Theological Seminary, through Phillips Place and Garden Street, joining the old sewer at Waterhouse Street. It would seem better to afford relief by an additional outlet than by an increase in size of the present one.

Early in the season, parties desiring to build large manufacturing buildings on Albany Street applied for a guaranty that proper drainage facilities would be afforded them in event of building. Encouragement was given them. One building has since been completed, and drainage is now asked for. Owing

to the lateness of the season, a temporary sewer has been constructed, which by the terms of the order must be removed within nine months of its passage; it will therefore be necessary to build a sewer early next season, suitable not only for this building, but for all the territory naturally draining in this direction. This sewer would connect with the sewer in Main Street, and if continued through Portland Street to the large sewer at the junction with Hampshire Street, would make a more direct line than that now followed by the Main Street sewer, and afford relief when the other sewers contemplated are added. A large number of sewers have been built by orders from the Board of Aldermen, by the City Engineer. All the work, as well as repairs and care of sewers, has been under the immediate supervision of Mr. Theodore L. Pike, now in the employ of this department; a gentleman of large experience in the construction and maintenance of sewers, and for a number of years in the employ of the Sewer Department of the city of Boston.

In connection with the new sewers built, there have been added some forty-six manholes, besides some twelve which have been built while making repairs on old sewers. Most of them have been fitted with perforated covers for ventilation.

The cement pipe sewer in Hastings Street, between Portland and Moore Streets, failed entirely, was taken up, and relaid with vitrified pipe.

The sewer in Village Street is badly cracked, but has been only partially relaid.

A locker 18 × 48 feet has been erected at the sewer yard, on Pilgrim Street, where all the stock and tools of the Sewer Department are now kept. There is now on hand a full assortment of fixtures and tools, suitable for any ordinary work.

The Binney Street sewer not being self-cleansing or provided with any arrangement for flushing, a design has been prepared for gates of moderate cost, which are soon to be tried.

The Sixth Street sewer, between Harvard Street and Broadway, built for a reservoir sewer to hold the accumulation of sewage while the tide gates are closed, retains deposits to a large amount, which have been thus far removed by hand. It is proposed to carry a wooden invert, of the same form as the

Harvard Street sewer, through the large sewer; this will but slightly reduce the reservoir capacity, and will form a suitable channel and guide through this portion of the sewer.

The usual number of drain layers from the different wards have been licensed, and two hundred and sixty-two permits have been issued to them. More stringent rules should be adopted in regard to this important work, and it may be advisable to issue printed rules and regulations for their use, and also to have all connections made in the presence of an inspector appointed by the Committee on Sewers.

The contract for building catch-basins was again awarded to Samuel McCulloch.

The contract for cleaning catch-basins and manholes was awarded to Cornelius O'Connor.

At the last session of the Legislature, a commission was appointed to consider the matter of drainage for the Mystic and Charles River valleys, to report to the Legislature of the coming year. Their report is awaited with considerable interest, as their suggestions if adopted may materially affect the interests of this city. It is very desirable that a general and comprehensive plan comprising a large area should be adopted, with a view to intelligent future operations in this and other cities and towns in the two river valleys.

The appropriations for sewers were: —

For Sewers (Construction)		$4,500 00
Additional		5,000 00
Total		$9,500 00
Expended for sewers and catch-basins		9,489 67
Balance unexpended		$10 33
For Sewers (Maintenance)		$7,500 00
Additional		511 96
Total		$8,011 96
Expended for cleaning Bridge Street sewer outlet, five ninths refunded by Somerville	$1,659 69	
For cleaning catch-basins	1,642 00	
Rebuilding Hastings Street sewer	432 57	
New manholes on old sewers	465 60	
Care and repair of sewers	3,812 10	
		$8,011 96

Water Works.

On the 9th of February, 1881, the temporary engine and pump placed on the border of Fresh Pond was started, and run for six days. When the pond reached the lowest point ever known, — grade 7.73, or 9.12 feet below high-water mark, — a large area of the bottom of the pond was exposed, from which large quantities of aquatic vegetation and other matter were removed, and a considerable portion of the shores was greatly improved. On the 15th, rain commenced, and the pond continued to rise from time to time until it reached its highest point — 16.04 — on the 18th of April, 1881.

The petition for an Act permitting the city of Cambridge to take an additional supply of water from the Shawsheen River was presented to the Legislature, and received several hearings before the proper committees, where a considerable opposition was developed by the mill owners and towns in Essex County situated on the course of the river. The city of Boston also desiring a portion of the river, an arrangement was made for a satisfactory division of the water, and the two cities united their petitions, and were heard jointly before the committee. After a full and thorough hearing, occupying several days, the committee reported a bill favoring the petition of Cambridge; it was presented to the Senate, where more opposition was developed, and the matter was referred to the next Legislature. The necessary steps have been taken for a further prosecution of the matter at the coming session.

The importance of some additional supply is again called to your notice. It is well known that Fresh Pond will not furnish a full supply, and has for a number of years been supplemented by the storm waters of Wellington Brook This source must sooner or later be abandoned on account of the impurities it receives, and the impracticability of removing or controlling them; it is only under the most favorable conditions, such as melting snows and frozen ground, that the water can be admitted with any degree of safety.

The matter of a better supply of water for the high service has received considerable attention. Plans have been submitted to the Water Board and received their approval; the necessar

appropriations of money have been passed by the City Council: but owing to the difficulty in obtaining the necessary pipe in season, the work will be delayed until spring. The contracts for the pumping engine and pipe have been made for an early delivery the coming season. The plan contemplates the erection of an additional pumping engine (of 1,000,000 gallons' capacity in twenty-four hours) at the present pumping station, laying a new force main to the reservoir, there connecting with the overflow pipe of the standpipe, which it is intended to use as a standpipe for the new high-service system. New lines of pipe will be laid to the several sections which it is desired to supply, and will embrace those portions of Arlington, Observatory, and Reservoir Hills situated above grade 60. Check valves and gates will be placed at suitable points on the mains now leading to these sections, by which arrangement no interference will be made with the present method of supply, should it become necessary or desirable to resort to or continue it.

A portion of the retaining wall on the northwesterly corner of the reservoir should be rebuilt the coming year.

In March last, an order was passed by the Board of Aldermen directing the closing of the culvert under Cushing Street, through which the water from Cider Mill Pond passes. The order was at once carried out by the Superintendent of Streets. As the discharge from this pond occurs only in the spring, and was nearly over at the time, very little benefit was derived the present year; it remains to be seen how effectual the remedy will be. No attempt has been made to provide for the flow of water from Richardson's Pond, which delivers much the larger quantity, at times very objectionable in quality, though not so bad as Cider Mill Pond. It seems to me that the only practical way to take care of these waters is by a sewer to carry it off, which should be built at an early day.

Cemetery.

A considerable amount of work has been done at the cemetery, of the usual character, such as staking out lots, giving lines and grades for avenues and paths, locating graves and entering them in the new book prepared for that purpose.

Surveys have been made and plans prepared, showing the cemetery and the contiguous lands, with a view to the purchase or taking of additional land necessary for burial purposes. This matter is one of great importance, and should not be much longer delayed.

Fire Escapes.

Outside inclined step-ladder fire escapes have been placed on the rear of the Ward Four city building, affording additional means of egress from Armory Hall; also on the rear of the Washington School-house. Circular iron stairways have also been placed in the upper stories of the Webster and Allston School-houses, affording additional means of egress from the upper stories of these buildings. A flight of wooden stairs has also been built between the third and fourth stories of the Putnam School-house.

Office.

A large map of the Shawsheen River, showing its water-shed and the proposed routes to Fresh Pond, was prepared for legislative use. A new map, showing the sewers, their sizes, drainage districts, and other details has also been prepared, and a new lithographic map of the city, 18×36″, of which there has been great need. A large amount of miscellaneous work has been performed for the various departments and committees of the city government. For the most of the time, five assistants have been employed.

The appropriation for engineering was	$6,200 00
The expenses have been, including salary of City Engineer, car fares, horse hire, pay of assistants, draughting materials, stone bounds, etc.	5,935 41
Balance unexpended	$264 59

Respectfully submitted,

WM. S. BARBOUR,
City Engineer.

REPORT

OF THE

COMMISSIONER ON WEST BOSTON, CANAL, AND PRISON POINT BRIDGES

For 1881.

The Commissioner for West Boston, Canal, and Prison Point Bridges submits for himself and associate his eleventh annual report of matters pertaining to the West Boston and Canal Bridges, and his sixth annual report on Prison Point Bridge.

West Boston Bridge.

This bridge will require the coming year a considerable expenditure for repairs, all of a minor kind, but aggregating more than has been usual for some years past.

The roadway and sidewalk pavements on the filled portion on the Cambridge side will have to be relaid; a work which it was proposed to do the past season, but which has been postponed to next, it having been deemed more judicious to repair the pavement so that it would last through the winter, and avoid the derangement of the surface which the frost would cause if the work was done this fall.

The flooring of the sidewalk approaches to the draw will have to be renewed the coming season, and portions of the bulkheads will also need renewal, as the upper timbers are in places quite rotten.

The draw with its appurtenant machinery is in excellent condition, and the entire bridge is in very good order.

Canal or Craigie's Bridge.

This structure has required only the ordinary repairs during the year, and with the exception of portions mentioned in former reports, is in good condition.

The substructure of the oldest portion of the bridge, which is on the Cambridge side, has been carefully watched, and repaired when necessary, and is apparently in as good if not better condition than for several past years.

It is not anticipated that any other than the usual repairs will be required during the next year.

Prison Point Bridge.

The Commissioner would again call the attention of the authorities of Cambridge to the importance of paving the approach to this bridge on the Cambridge side, as a measure both of economy and of convenience to the travel over the bridge. The reasons in its favor have been so often repeated by the Commissioners that a reference to their reports renders their repetition at this time needless.

The bridge and other structures connected therewith have not required any extensive repairs during the past year, and will not require more than the ordinary repairs during the next, as they are now in good order.

Superintendent Story has kept an account of the amount and kind of freight which has passed through the draw, and it will be found appended.

EZRA PARMENTER,
Commissioner for City of Cambridge.

NUMBER OF TIMES THE DRAW IN WEST BOSTON BRIDGE HAS BEEN OPENED DURING THE YEAR.

December,	1880	88
January,	1881	13
February,	1881	6
March,	1881	59
April,	1881	127
May,	1881	184
June,	1881	254
July,	1881	303
August,	1881	254
September,	1881	245
October,	1881	186
November,	1881	156
Total for the year		1,875

CHARLES W. BLANEY, *Superintendent.*

NUMBER OF TEAMS OF ALL KINDS CROSSING WEST BOSTON BRIDGE IN ONE DAY, DEC. 22, 1881, BETWEEN THE HOURS OF 6 A. M. AND 6 P. M.

Cambridge to Boston: —	
Teams	1,110
Horse cars	440
Foot passengers	1,065
Boston to Cambridge: —	
Teams	1,020
Horse cars	430
Foot passengers	775
Including both ways: —	
Total number of teams	2,130
" " " horse cars	870
" " " foot passengers	1,840

NUMBER OF TIMES THE DRAW IN CANAL BRIDGE HAS BEEN OPENED DURING THE YEAR.

December, 1880	177
January, 1881	15
February, 1881	22
March, 1881	139
April, 1881	338
May, 1881	388
June, 1881	467
July, 1881	509
August, 1881	463
September, 1881	346
October, 1881	348
November, 1881	293
Total for the year	3,505

A. W. SMITH, *Superintendent.*

NUMBER OF TEAMS OF ALL KINDS CROSSING CANAL BRIDGE IN ONE DAY, NOV. 12, 1881, BETWEEN THE HOURS OF 7 A. M. AND 6 P. M.

Teams	4,120
Horse cars	520
Foot passengers	4,430

NUMBER OF TIMES THE DRAW IN PRISON POINT BRIDGE HAS BEEN OPENED DURING THE YEAR.

December, 1880	56
January, 1881	
February, 1881	2
March, 1881	15
April, 1881	39

May, 1881	31
June, 1881	33
July, 1881	37
August, 1881	63
September, 1881	56
October, 1881	59
November, 1881	31
Total for the year	422

N. E. STORY, *Superintendent.*

STATEMENT OF THE AMOUNT AND KIND OF FREIGHT WHICH PASSED THROUGH PRISON POINT BRIDGE DURING THE YEAR ENDING DEC. 1, 1881.

Lumber	2,204,000 feet B. M.
Laths	375,000
Shingles	300,000
Staves	170,000
Coal	24,376 tons.
Posts	1,800 pieces.
Wood	1,545 cords.
Ladder stuff	1,500 pieces.
Lime	775 barrels.

Number of teams of all kinds crossing the bridge in one day, between the hours of 6 A. M. and 6 P. M.	1,981
Number of teams in three days in one week	5,439
Number of passenger trains, Eastern Railroad, crossing bridge in one day	96
Number of freight trains and engines, Eastern Railroad, crossing bridge in one day	241

The expenses of the city of Cambridge for the care and maintenance of West Boston, Canal, and Prison Point Bridges for the year were as follows: —

Amount of appropriation		$6,000 00
Superintendents' and engineers' salaries	$2,179 89	
Commissioner's salary	500 00	
General repairs, lumber, etc.	904 55	
Fuel, gas, oil, and water rates	1,186 17	
Sweeping, cleaning, and watering streets	488 51	
Iron work, hardware, and tools	249 29	
Sundry small supplies	10 68	
Total expenses		5,519 09
Balance of appropriation unexpended		$480 91
Receipts for wharfage, etc.		119 34
Balance Nov. 30, 1881		$600 25

ANNUAL REPORT

OF THE

TRUSTEES OF THE CAMBRIDGE PUBLIC LIBRARY.

The Trustees have the honor to present to the City Council their annual report; it being the twenty-fourth since the foundation of the library, and the third under the title of the Cambridge Public Library. It contains a detailed account of the operations of the institution for the year ending on the 30th of November last, together with such remarks on its condition and purposes as the occasion seems to require.

At no time since the library became free to the public, nearly eight years ago, have the efforts of the Trustees been more particularly directed to the quality of the books procured than during the year just ended. The critical examination before admission to the shelves, which has been explained to the City Council in former reports, has been continued the past year with an increased scrutiny. The addition of works of the more substantial and valuable kind has been in excess of any previous season.

In the department of history, the accessions have been numerous and important. This portion of the library, which before was quite voluminous, may now be regarded as an excellent collection of historical books. In regard to this, the librarian, in her report to the Trustees, remarks that "for a library no larger and no richer than this, it is remarkably well supplied with historical and descriptive works on all the principal countries of the world."

We have much increased, also, the books of reference, in the form of encyclopædias, atlases, and detached volumes. Works of this kind, we are assured by the librarian, in her report just

referred to, "are more and more consulted by pupils and teachers; and the Trustees may feel that the generous additions to this department, during the past year, will be used with profit by many who are learning to look upon the library as a means of education." A want much felt by Sabbath-school teachers and scholars has been met by the purchase of an encyclopædia of Biblical literature, in ten volumes. It will be highly prized by all who are interested, either as teachers or scholars, in scriptural studies.

In the department of art, too, additions have been made which cannot fail to be appreciated by the community. The love and culture of art are constantly on the increase in American society, particularly that branch called the fine arts. To this fact the Trustees have not been indifferent; and the library, which was before well supplied, has been much enriched during the year. All divisions of the useful or mechanical arts, as distinguished from the polite arts, as they are termed, have received a due share of attention; and the utility of the selections that have been made will be gladly recognized by those of our readers who are giving attention to the subject. The library is now so well furnished in this respect that all who are interested in the mechanical arts, as applied to machinery and engineering, to building and architecture, as well as those who would advance themselves in the knowledge of the politer arts of music, painting, and sculpture, will here find much that will tend to their development and improvement.

To the scientific and religious portions of the library, all works published from time to time that were regarded as of a popular character have been added. Those of the merely technical or dogmatic description have been passed by as not adapted to the requirements of a public library.

In the department of fiction and juveniles, the accessions have been less than in many previous years. This was owing to the circumstance that fewer were published, we think, than usual; and many that were examined did not come up to the required standard, and were of course rejected. The selection of this class of writings is the most difficult and delicate of all the duties we are required to perform. In previous reports of the Trustees of this library, it cannot have escaped notice that

the question of the proportion and quality of the fiction that should be offered to the public has been one of much anxiety; and this board realizes in the fullest manner the importance of the subject, and its bearings upon the morals of our readers and the success of the library as a beneficent force in the community.

In the report of the Trustees to the City Council of 1880, this subject was discussed at some length, and their policy and management were fully developed. This board has followed generally in their footsteps, and has not thought it expedient to inaugurate new methods.

There are many in the community who seem to have a misconception of the scope and function of a public library.

Is it not our duty, as officials, to adapt the library to "all sorts and conditions of men?" Is it not our duty to provide such reading as the public, which is taxed for the support of the institution, demands, carefully excluding all that would have a tendency to pervert the moral sense, exercising our best judgment in making the selections? Fair-minded people would most certainly answer in the affirmative.

We are not called upon to cater to the taste of the purist or specialist in any department of literature. The student of history or art, science or philosophy, religion or poetry, is not to be preferred above the more humble reader, who seeks in his hours of leisure or relaxation from toil, books that will divert his mind, and withdraw it, for a time, from the exacting demands of every-day life.

Every one has his preferences. This reader turns his attention to history, another to travels, a third to biography or romance, and so on. The library is not designed for the gratification of any one of these tastes specially, but for all of them.

We are not to be understood as saying that it is incumbent upon us to furnish reading that would gratify all tastes, or to provide anything that would have a pernicious tendency, merely because it might be desired by a certain class of readers. On the contrary, we are to exclude rigidly everything of the sort. But it should be remembered that writings that might operate injuriously upon some minds, upon others would have no evil effect whatever. All who have a general knowledge of

books must be willing to admit that under the guise of fiction the finest pictures of life and manners are presented, the highest lessons of duty are taught, and the loftiest conceptions of truth and right, and the soothing influences of religion, are conveyed to the mind and heart.

The opinions entertained of the results to the individual by the constant reading of imaginative works are various and diverse. An approach to unanimity can hardly be expected. Let all be treated in a candid and tolerant spirit. There are many good people who regard every novel as immoral in its drift; yet Sunday schools and religious associations do not form a library without resorting to fiction for most important aid. This course cannot be avoided; for fiction covers a wider space in the world of literature than any other description of writing. The Bible is full of it, in the form of allegory and parable, as almost every child knows; and some of the most striking lessons of Scripture are conveyed in this form. As an illustration of these conflicting ideas, and to come quite home, this library has been condemned for circulating Oliver Optic's works; yet some of the Sabbath-school collections in this community contain them. They are thus commended as proper Sunday reading for youth of both sexes.

We question whether any public library can be successfully charged with issuing books knowingly that are distinctly of an impure character. As regards this library, out of nearly fourteen thousand volumes on its shelves, not a dozen probably could be so called. Our scrutiny applies as well to the past as the present; and if any of this kind should be found, they will be at once discarded. That there are some works here that are highly wrought and sensational, such as a vigorous and mature mind would treat as unworthy to spend time upon, we do not deny; but that there are any of a really pernicious character we do not admit. Books that are vapid are not necessarily vicious. Such may have no special value, contributing merely to the amusement of the reader; but they are harmless in their effects.

One great office and faculty of a public library is to create and foster a love of reading. This is almost always accomplished by the perusal, at the start, of the lighter publications;

and the reader gradually passes to the more solid diet of history, travels, and biography, and onward to the more important departments of knowledge. This is the uniform experience, and is capable of demonstration. We would earnestly ask the City Council to consider the value of this institution to the community in this single aspect, and decide if for this alone it is not entitled to confidence and support.

The person who in early life acquires a habit of reading, and holds fast to it throughout the years, has a priceless treasure in his possession. Such an acquisition will bring relief from a burdened mind, rest from toil and weariness, and consolation under the numerous adverse occurrences which constantly beset us. He can turn on the instant to an exhaustless fountain, and find in books forgetfulness of cares, and resignation amid the trials of life. Often it happens that some misfortune, arising from the loss of property, perhaps some unforeseen calamity or personal affliction to family or friends, some defeat of the virtuous and good, or triumph of the mean and treacherous, or some other of the

> " Whips and scorns of time,
> The oppressor's wrong, the proud man's contumely,
> The pangs of despised love, the law's delay,
> The insolence of office, and the spurns
> That patient merit from the unworthy takes,"

will harass and depress him for a while; but he can rise above them all, and debarring their influence from his mind, find in his books joy, comfort, and peace, and courage and hope that will enable him to engage anew in the struggles and contentions of the world.

We are convinced that it is not in vain that all are solicited to avail themselves of the privileges here offered. From our observation of those who visit the rooms, and the character of the reading they select; we are confident that the library is doing good work in the direction spoken of, — that of forming and sustaining a habit of reading, a genuine love of books. Many will carry it through their lives, and find it both pleasant and profitable in every change of fortune.

A free library, such as this, is a great public benefaction, continually augmenting in power for good to the community.

Its influence can be limited only by its ability to adapt itself to the needs of all classes; and this is a question of means only. We need more and better rooms, fitted for the business of a library that is open to all; a special building, that shall be an ornament to the city and a safe and convenient depository for our books. Many places in our vicinity have been provided with lavish accommodations by the generosity of opulent citizens. Let us hope that their example may be followed by some of our wealthy townsmen; for, to quote a remark made publicly by our distinguished citizen, Dr. McKenzie, in reference to this matter, "The narrow chambers which are used for the purposes of the library are a discredit to a city with our literary pretensions."

The statistics which follow show the workings of the library for the year just ended, and its present condition: —

Books Issued.

First quarter	23,903
Second quarter	23,744
Third quarter	16,843
Fourth quarter	18,360
Total for the year	82,850
Total issue for 1880	83,184
Decrease in 1881	334
Largest issue for any month (March)	9,268
Largest issue for any day (March 5)	657
Average issue per day	272

Accessions.

By purchase, including those bought with the Fay legacy	892
By gift	61
Total	953
Number of books in library at the close of 1880	12,817
Total now in library	13.770

Miscellaneous.

Number of books lost	3
Number of books re-covered with paper	9,175
Number of books replaced, worn out	204
Number of postals sent for return of books overdue	2,572
Number of cards issued to subscribers during the year	1,228
Number of cards now in use by subscribers	8,243

Donors.

	Vols.		Vols.
City of Cambridge	7	C. H. B. Breck (alderman of Boston)	2
City of Taunton	1	Dr. E. O. Phinney	1
State of Massachusetts	6	Samuel Dunster	1
United States	4	F. W. Story	4
Cobden Club, England	1	Mrs. Holt	1
John S. March	9	D. G. Dexter	1
S. H. Sanborn	21		
Town of Watertown	1		
Macullar, Parker & Co.	1	Total	61

Reading Room.

This room grows more and more in the popular favor, and is much frequented by those who do not need books, but find all they want in the newspapers and periodicals of the day; it is a valuable auxiliary to the library.

Mrs. D. S. Kelly, who had been in charge of the reading room since its establishment, eight years ago, resigned the office of superintendent in July last, impelled thereto by home duties. The Trustees highly appreciated her fidelity to the requirements of her office, and she carried into retirement their highest regards and best wishes for her future.

Receipts.

From fines	$142 77
From sales of catalogues and waste paper	17 47
Total	$160 24

The amount has been paid into the city treasury, as required by the ordinance.

The Fay Legacy.

This remains as at first, invested in the city's note. The amount is one thousand dollars, and it yields six per cent a year, which is applied to the purchase of books as required by the will of the donor.

Paige's History of Cambridge.

No exchanges of this work have been effected this year. The number in our custody is the same as at the time of the last report.

Expenditures.

Salaries, — Librarian, assistants, superintendent of reading room, janitor, and helpers (transient and permanent) .	$2,338 52
* Rent of rooms	750 00
Books, periodicals, and newspapers	1,841 81
Gas, $302.27; insurance, $105; bookcases, $70	477 27
Printing and stationery	253 00
Binding and repairs of books	463 70
Chairs, mats, and ice	86 67
Sundry repairs by carpenter, gas fitter, glazier, etc. . . .	30 21
Petty expenses, — postages, expressage, etc.	58 32
	$6,299 50
Amount of appropriation	6,300 00
Unexpended	$0 50

It is now nearly twenty-four years since the city assumed the maintenance of the library. During this time, $60,536.75 have been appropriated for its support; and out of this total, $20,-022.55 have been expended for books.

The board requests that $6,500 be placed at its disposal for the coming year.

Respectfully,

HENRY H. GILMORE,
JOHN S. MARCH,
SAM'L L. MONTAGUE,
GEORGE H. FOLGER,
H. B. GOODWIN,
WM. B. DURANT,
JOHN CONLAN,

Trustees of Cambridge Public Library.

* The annual rent is $1,000; the bill for the last quarter was received after the financial year had closed. It will be chargeable, therefore, to the appropriation for 1882.

REPORT

OF THE

TRUSTEES OF THE DOWSE INSTITUTE.

To the Honorable City Council of Cambridge: —

The Board of Trustees of the Dowse Institute respectfully transmits an attested copy of the annual report of its treasurer, which contains an exact account of the receipts and expenditures for the year 1880–81.

The regular course was given in Union Hall, and consisted of one lecture each by John B. Gough, Wendell Phillips, William Parsons, W. H. Niles, Mary A. Livermore, Joshua L. Chamberlain, and Robert Collyer; of four lectures by George M. Towle; of concerts by the Schubert Concert Company, and the Mendelssohn Quintet Club; and of a reading by J. J. Hayes.

Respectfully submitted,

W. W. WELLINGTON,
W. A. BULLARD,
FRANK A. ALLEN,
JAMES A. FOX,
CHARLES WALKER,
} *Board of Trustees.*

Cambridge, Dec. 28, 1881.

REPORT

OF THE

TRUSTEES OF THE BRIDGE CHARITABLE FUND.

This board presents the fifth annual report in relation to the fund committed to its care.

As stated in the earlier reports, the amount of the original donation was at once deposited in the Cambridgeport Savings Bank. It has ever since remained there; and with interest accumulations to Jan. 19, 1882, will then amount to $2,137.27.

Under the provisions of the deed of trust by which Levi Bridge conveyed the original sum to the city, it has become necessary that two thirds of the annual increase should be paid over to the Overseers of the Poor, the remaining one third to be added to the principal forever. After the date herein named, it will be the duty of the trustees for 1882 to draw from the fund the sum of $91.52, it being two thirds of the amount in excess of $2,000, and pay the same as prescribed by the donor.

The present board, as it relinquishes its charge, can only repeat the wish of the preceding board that other charitably disposed persons may recognize the beneficent intent in which this trust was conceived, and that the amount thereof may go on increasing year by year, until the generous distribution of its surplus interest shall annually carry comfort to hundreds of suffering poor.

JAMES A. FOX,
S. S. SLEEPER, } *Trustees.*

REPORT

OF THE

TRUSTEES OF THE SANDERS TEMPERANCE FUND.

This board respectfully submits its annual report to Nov. 30, 1881, it being the seventeenth since the establishment of the fund.

The history of this fund has been so often given in reports of former years that another recital thereof is deemed unnecessary.

The present board has continued the services of Mr. Alonzo Stewart as missionary under the terms of the bequest. Meetings have been held quarterly, under by-laws established by the board, and oftener when called by the mayor. The trustees have thus been regularly informed of the doings of the missionary, and a detailed account of his daily work has been kept in a journal which has been subject to the inspection of members of the board at all times. The office hours of the missionary at the City Hall, from 2 to 3 P. M., as heretofore established, have been continued. It has been the practice of Mr. Stewart to attend the sessions of the Police Court, there exercising a watchful care over such cases as deserve his recognition, and he has at all times sought to become a "ministering angel" to such as are suffering from the thraldom of rum. This board commends him and his work to the favorable notice of its successors.

The fund is still represented by a note for $10,000, signed by W. W. Dallinger, City Treasurer, and payable to the order of this board. Attention is called to the report of the missionary, which is appended hereto.

JAMES A. FOX,
NATHAN G. GOOCH,
JOHN READ,
GEO. A. DAVIS,
} *Trustees.*

REPORT

OF THE

SANDERS TEMPERANCE FUND MISSIONARY.

To the Trustees of the Sanders Temperance Fund: —

Gentlemen, — The missionary of the Sanders Temperance Fund would respectfully submit the following report of his labors for the past year, in accordance with the conditions of the bequest and the instructions of the trustees.

The retrospect of the past year does not present such flattering results as I could wish, nor as I hoped for at its commencement. But in this field of labor, the *real* and the *apparent* are not always the same. Good seed has been sown which, although the ripe fruit has not yet appeared, may yet germinate, and bring forth the good results so anxiously desired.

In the performance of the duties assigned to me by you, I have held personal conversation upon the evils of intemperance with more than nine hundred and seventy persons, whose names are entered upon my daily journal. I have been in attendance upon the sessions of the Police Court and at my office in the City Hall every week-day, with but few exceptions. I have attended one hundred and fifty-six temperance and kindred meetings. I have held religious and Sabbath-school exercises in the female department of the House of Correction every Sabbath morning.

I have obtained by personal solicitation and distributed more than 22,425 pages of temperance and religious literature. I have taken pledges of total abstinence from all intoxicating drinks, from ninety-two persons. I have visited, by request, many families where intemperance was causing want, wretchedness, and ruin; and in many cases, I have reason to believe that such visits have been productive of good results.

In spite of all our efforts, but little success can be gained over this monster evil, so long as access to it is made so easy, and the invitations to indulgence in it are legally extended all along our public streets. If we can stay the fountain, we can better manage the smaller streams; if we can render the selling unlawful, we can the better hold the ground we gain each year.

Respectfully submitted,

ALONZO STEWART,
Temperance Missionary.

DECEMBER 31, 1881.

REPORT

OF THE

COMMITTEE ON SOLDIERS' AID.

The Committee on Soldiers' Aid submits to the City Council its report for the year ending Nov. 30, 1881.

The amount paid as regular State aid was	$12,963 50
The amount paid to indigent soldiers and sailors was	4,913 00
The amount paid to the agent employed in the examination of settlements, etc., was	278 75
Total	$18,155 25

The amount received from the Commonwealth was	$14,718 47
The amount received from other towns and cities	433 00
	$15,151 47

There are now upon the State-aid list 219 persons, and upon the list of indigent soldiers and sailors 44.

All of which is respectfully submitted.

MICHAEL CORCORAN,
WM. E. DOYLE,
F. L. CHAPMAN,
HENRY H. GILMORE,
E. T. NICHOLS,

Committee on Soldiers' Aid.

REPORT

OF THE

CAMBRIDGE WATER BOARD.

To the Honorable City Council of the City of Cambridge: —

The Cambridge Water Board herewith submits to you its seventeenth annual report, in accordance with the requirement of the city ordinance.

Total Cost of the Works.

Cost of the Water Works, Nov. 30, 1880, as per last year's report	$1,721,830 54
Expended on construction account during the year ending Nov. 30, 1881	6,824 81
Making total expenditure	$1,728,655 35

Water Bond Account.

Whole amount of water bonds issued	$1,714,900 00
Less amount paid from the Water Loan Sinking Fund to Nov. 30, 1881	236,400 00
Leaving unpaid water debt	$1,478,500 00
Deduct from this the value of the Water Loan Sinking Fund, per Trustees' account	427,630 31
Leaving amount yet to be met as provided for by the Sinking Fund	$1,050,869 69

Statement showing in brief the transactions on account of the water works for the year ending Nov. 30, 1881: —

Received.

From water rates	$171,135 52	
Less water rates refunded	1,072 79	
		$170,062 73
Shutting off and letting on water, and fines		690 50
Rent of house		144 00
From supply account		3,710 78
		$174,608 01

Expended.

For construction account	$6,824 81
For maintenance account	23,833 89
For supply account	2,928 68
Interest on water debt	91,585 00
Paid into Sinking Fund	45,855 00
Balance showing gain in 1881	3,580 63
	$174,608 01

Comparative Receipts.

Water rates for the year ending Nov. 30, 1880	$173,325 49
Water rates for the year ending Nov. 30, 1881	170,062 73
Showing loss in 1881 to be	$3,262 76
The reduction on hydrants made during the year was	$8,865 00
Deduct the loss in receipts as stated above	3,262 76
Showing the real comparative gain in 1881 to be	$5,602 24

Water Supply.

By reference to the report of the superintendent, it will be seen that the total amount of water pumped during the year was 902,319,300 gallons, being a daily average of 2,472,108 gallons. A full supply has been furnished during the season for drinking fountains, fire hydrants, and watering the streets.

The water in the pond Dec. 1, 1880, stood eight and one eighth inches below the top of the conduit. At the same date this year it stood two feet five and seven eighths inches above the top of the conduit, being a gain of three feet one inch.

Fresh Pond reached its lowest level on the 9th and 10th of February, 1881, being 1.27 feet below the top of the conduit; this being the lowest level that we have any record of. At that time the water in the well-room was below the reach of the injection pipes of one of the pumps, while the other was so nearly in the same condition that it was considered unsafe to continue to use it, and it was therefore found necessary to start the centrifugal pump on the border of the pond to pump into the conduit. This pump, as we notified you in our last report, had been provided for such an emergency, and our experience proved that it was not procured any too soon. This pump was run six days, when a heavy rain set in which raised the water in the pond, and we have not had occasion to use the pump since.

It will be seen that for several days our entire supply of water was furnished through the pump on the border of the pond pumping into the conduit. Had a break occurred in this pump or machinery, our only recourse would have been the connecting pipe with the Boston Water Works.

On the 18th of April, 1881, the water in the pond reached the highest level during the year, being 7.04 feet above the conduit. We have no doubt the water would have reached high-water mark, if the drainage from the muck heaps of Niles Brothers had not mingled to so great an extent with the water running into Wellington Brook; this made it necessary to shut off the water from running into the pond through the conduit. The conduit was opened and closed at various times until May 21, since which time no water has come into the pond from Wellington Brook on account of its impure condition.

On Feb. 25, 1881, Messrs. Niles Brothers were ordered by the Board of Health to cease putting any more refuse stuff from their slaughter-house on the muck heaps after that date; and that order has been obeyed.

Comparative Rainfall and Height of Water in the Pond during the Year.

MONTHS.	Rainfall.			Below high-water mark.		
	1879.	1880.	1881.	1879.	1880..	1881.
	Inches.	Inches.	Inches.	Feet.	Feet.	Feet.
December, 1880.....	4.30	3.76	1.98	2.15	4.87	8.52
January, 1881.....	2.20	2.62	5.03	2.25	4.87	8.55
February, "	3.43	3.49	4.14	2.92	4.60	8.20
March, "	4.02	2.85	6.07	2.72	4.14	2.65
April, "	5.65	1.94	1.83	1.62	3.90	0.98
May, "	1.28	1.44	3.32	1.50	4.44	1.26
June, "	4.59	0.73	6.27	1.79	5.38	1.72
July, "	2.64	6.49	3.41	2.27	6.29	2.36
August, "	5.79	3.48	1.13	2.79	6.79	3.24
September, "	1.71	1.63	2.74	3.11	7.46	4.07
October, "	0.76	2.63	2.85	3.97	8.03	4.87
November, "	3.18	2.25	4.08	4.58	8.33	5.23
Total.....	39.64	33.31	42.85	Av. 2.64	Av. 5.76	Av. 4.30

It will be seen that we had 9.54 inches more rainfall in 1881 than in 1880; this being about seven inches below the average. We are dependent upon the rainfall of a comparatively small area, and this we can secure only when it comes in large quantities at times when the ground is covered with snow or frozen. This combination of circumstances cannot be relied upon. They almost entirely failed us in 1880, which brought us into an emergency; but this year we were again favored, which relieved us. It is not prudent or safe for a great city like Cambridge longer to depend upon such uncertain sources for her water supply.

Purity of the Water.

It has long been the desire of the board to prevent the foul water of Cider Mill Pond from flowing into Fresh Pond, by closing the culvert in Cushing Street; but after consultation with the city solicitor, we refrained from doing so, and asked for an appropriation by the City Council to construct a sewer at an expense of $10,000, which was granted; but in the month of March last, as this street was now under the control of the city of Cambridge, the suggestion was renewed, and the culvert was closed by an order of the Board of Aldermen, March 22, 1881, and no water has flowed from this pond into Fresh Pond since that date. We trust that under no circumstances will its foul water be allowed to contaminate Fresh Pond in the future.

It is a source of gratification that, while we have heard many and well-grounded complaints from other places about the poor quality of the water furnished, our water has maintained its good name and quality, giving general satisfaction to our customers. The analyses that we have had show that there is but little change in the water. It will be our duty to guard well this fine natural reservoir that has been provided for us, and to see that nothing is introduced into it that will tend to deteriorate the quality of the water.

Leakage and Waste.

Continued efforts have been made during the year to ascertain and stop all leaks and waste of water. As a result of

these efforts, 415 leaks have been stopped, of which 39 were found in main pipes, 85 in supply pipes, and 291 on premises of water takers. These last named were reported by the inspectors and repaired by the owners or occupants. There have been sold by measure 37,554,550 gallons more water this year than last year, while the amount of water pumped this year more than last is but 15,420,900 gallons; showing a gain of 22,133,650 gallons, although there have been added 201 new supplies during the year.

By reference to the report of the superintendent, it will be seen that in the month of November the chronograph at the reservoir recorded a loss of 137,175 gallons between the hours of 12 midnight and 4 A. M., this being 34,293 gallons per hour. Of this amount it was ascertained as near as possible that 7,000 gallons flowed through meters, leaving 27,293 gallons used for other legitimate consumption and waste, an amount but a fraction over two quarts *per capita* per hour. By this it will be seen that our pipes must be in excellent condition in regard to waste of water and leaks, as by experiment we have found that the entire amount of water as above ascertained used during the night, for various purposes, and including wastes and leaks, are all together only equal to about the amount that would be delivered through a two-inch pipe at the level of the corner of Harvard and Inman Streets.

This favorable result, we think, is largely due to the untiring efforts of our superintendent, who has worked day and night to reduce the waste and leakage of water to a minimum.

High Service.

Continual and well-grounded complaints have been made for years past by our citizens residing on Washington Avenue and Arlington Street, that they could not obtain an adequate supply of water under the present system. A careful examination of the whole subject of high-service supply has been made, and a plan adopted by the board, which was submitted to the City Council with the request that an appropriation of $10,000 be made that the same might be carried into effect. The plan proposed by the City Engineer contemplates an additional pumping engine, of 1,000,000 gallons capacity in twenty-four

hours, at the present pumping station, and a new force main extending to the reservoir, there connecting with the overflow pipe of the standpipe, which it is proposed to use as a standpipe for the new high-service system. New lines of pipe will be laid to the several sections which it is desired to supply, embracing those portions of Arlington, Observatory, and Reservoir Hills situated above grade 60. Check valves and gates will be placed at suitable points on the mains now leading to these sections, by which arrangement interference with the present method of supply will be avoided, in case it should become necessary or desirable to resort to this method. The City Council having made the appropriation, the board has made contracts for the necessary pump and pipes, and the work will be commenced in the spring. Its early completion will be no less gratifying to those of our citizens who have so long suffered and so patiently waited for a supply of water, than it will be to the Water Board, that this long and perplexing question has at last been so satisfactorily and economically settled.

Additional Supply of Water.

We would again call your attention to the importance of securing at an early day an additional and ample supply of pure water. Our own experience the past few years is warning enough, while in addition the complaint has come to us this year from other cities, almost universally complaining of short supply. The experience of nearly all the water works we know anything about shows that the sources of supply are overrated, and the wants of the people are underrated, at first. In a growing city like Cambridge, where the supply we have has been so thoroughly tested, and the prospective demand must be large, we do well to heed these lessons, and act with wisdom in providing for both the present and future wants of our city.

An application was made last winter for the right to take water from Shawsheen River. The committee to which the Legislature referred our application, after a fair hearing of our case, reported a bill giving us the right to take the water; but in the Senate the bill was opposed, the result being that it was referred to the next Legislature.

We would therefore earnestly recommend that every reasonable effort be made this winter to secure from the Legislature the right to take a part of the water from Shawsheen River; with this right secured, we think Cambridge will be well provided with an ample supply of pure water for many years to come. We are not aware of any other source of supply that can be got at a reasonable expense. We say reasonable expense, because while the first outlay may seem large, yet the benefits that the city will derive from it will more than compensate; indeed, we do not see how we can long continue without additional supply.

General Remarks.

The Water Board believes that the Water Works were never in better condition than at the present time, and that they will compare favorably with the best in the country, except in the lack of an adequate supply of water.

With the exception of the construction of the proposed high service, no large expenditure will be required the ensuing year. We do not think there will be any necessity of increasing the debt of the Water Works on account of construction the coming year, as our present means and resources will be sufficient to pay for all extensions contemplated. A line of small pipe has been laid into the Belmont District, and it is proposed to re-enforce this with a larger pipe. The northwest corner of the reservoir needs repairing; and we intend laying new pipes in McCabe, Jefferson, and a portion of Porter Street, in accordance with the recommendations of the superintendent, to take the place of pipes now laid so deep that it will not pay to remove or raise them.

GEORGE P. CARTER,
C. W. KINGSLEY,
JAMES M. W. HALL,
H. L. EUSTIS,
K. S. CHAFFEE,
JAMES A. FOX,
CHARLES WALKER,
} *Water Board.*

Analysis of Water from Fresh, Spy, and Little Ponds, by Prof. E. S. Wood, during the season of 1881.

Figures express parts per 100,000 of water.

Date.	Locality.	Filtered or Unfiltered.	Free Ammonia.	Albuminoid Ammonia.	Chlorine.	Total Residue.	Hardness.	Remarks.
1881.								
Jan. 31.	End of pumping conduit	Filtered.	0.0368	0.0182	1.51	14.20	9°	
" 31.	Faucet	"	0 0181	0.0200	1.51	19.51	8°	
Feb. 9.	End of pumping conduit	"	0.0338	0.0178	1.50	16.90	8°	
" 9.	Faucet	"	0.0184	0.0224	1.50	13 60	7½°	
" 12.	Faucet	"	0.0088	0.0206	1.80	13.10	8°	
" 12.	Water flowing from muck heap	"	4.6940	3.9420	2.70	37.10	2°	Very foul odor.
" 19.	From muck heap	"	0.1240	0.0678	0.70	5.10	½°	Foul, but not as bad as Feb. 12.
March 8.	Wellington Brook, Brighton Street	"	0.0342	0.0380	0.58	5.20	4½°	
" 8.	Wellington Brook, Flume	"	0.0302	0.0370	0.64	6.30	3°	
" 4.	Faucet, 4.45 P. M.	"	0.0208	0.0182	1.80	15.70	8°	
" 5.	Faucet, 9.30 A. M.	"	0.0202	0.0244	1.80	15.80	7½°	
" 6.	Faucet, 12 M.	"	0 1120	0.0210	1.70	13. 0	7½°	
" 11.	Faucet, 10 A. M	"	0.0182	0.0278	1.80	13.80	9½°	
May 24.	Richardson's Pond	"	0.0098	0.0478	0.94	14.20	4°	Large amount of organic matter.
June 7.	Fresh Pond, 200 feet from conduit	"	0.0011	0.0240	1.70	11.90	7°	
" 7.	Faucet	"	0.0013	0.0248	1.70	18.30	7°	
Dec. 7.	Fresh Pond, 200 feet from conduit	"	0.0413	0.0342	1.60	16.80	6½°	
" 7.	Faucet	"	0.0282	0.0170	1.60	14.20	6½°	

REPORT

OF THE

WATER REGISTRAR.

WATER REGISTRAR'S OFFICE,
CAMBRIDGE, Dec. 8, 1881.

To the Cambridge Water Board: —

THE undersigned herewith presents his Sixth Annual Report, showing the receipts, expenditures, and abatements for the year ending Nov. 30, 1881, together with a statement of the number of water-taker, fixtures, etc., as required by city ordinance.

Amount of bills remaining unpaid Nov. 30, 1880: —

Water rates	$328 66	
Meter rates	92 53	
Supplies and repairs	604 52	
		$1,025 71

Amount of bills placed in hands of City Treasurer for collection from Dec. 1, 1880, to Dec. 1, 1881: —

Water rates	$140,139 47	
Meter rates	34,683 61	
Supplies and repairs	3,983 36	
Off and on water, seals, fines, and rent	834 50	
		179,640 94
Total		$180,666 65

Deduct.	Abated.	Unpaid.	
Water rates	$3,588 69	$423 17	
Meter rates	1 25	95 64	
Supplies and repairs	296 98	580 12	
	$3,886 92	$1,098 93	= 4,985 85
Balance			$175,680 80

Receipts.

Water rates	$136,456 27	
Meter rates	34,679 25	
		$171,135 52
Off and on water, seals, and fines	$690 50	
Rent of house at pipe yard	144 00	
		834 50
Total rates, fines, etc.		$171,970 02
Supplies and repairs		3,710 78
Total		$175,680 80
Amount reported by City Treasurer as received by him		175,680 80

Expenditures.

Construction account		$6,824 81
Supply account		2,928 68
Maintenance account, viz.: —		
Care and repairs	$12,337 43	
Pumping service	6,375 78	
Office expenses	5,120 68	
		23,833 89
Total		$33,587 38

Abatements.

Abatements of water rates have been made during the year to the amount of	$3,589 94
Abatements on supply and repair account	296 98
Total	$3,886 92

The above amount of abatements is caused by the necessary abatement of all charges upon supplies shut off or fixtures sealed before the books can be balanced. New charges are then made when the water is again let on.

Refunds.

Water rates have been refunded to the amount of	$1,072 79
Which amount deducted from receipts	171,135 52
Leaves net receipts for water	$170,062 73

Water has been shut off for non-payment of rates, or per order of owners on account of vacancy, and seals have been applied by request of owners or occupants, as follows: —

Supplies shut off in 1881	434
Supplies let on in 1881	356
New supplies let on in 1881	184
Supplies let on, shut off in previous years	62
Seal locks applied to fixtures in 1881	473
Seal locks removed from fixtures in 1881	204
Seal locks removed, put on in previous years	248

Water rates unpaid Nov. 30, 1881	$144 17
City water rates unpaid Nov. 30, 1881	279 00
Meter rates unpaid Nov. 30, 1881	95 64
Supplies and repairs unpaid Nov. 30, 1881	580 12
Total	$1,098 93

Statement of the yearly revenue received from water rates since the purchase of the works by the city: —

From	April 28, 1865,	to	Dec. 1, 1865	$32,367 19
"	Dec. 1, 1865,	"	1, 1866	40,073 27
"	" 1, 1866,	"	1, 1867	52,733 62
"	" 1, 1867,	"	1, 1868	63,747 42
"	" 1, 1868,	"	1, 1869	76,149 30
"	" 1, 1869,	"	1, 1870	92,606 95
"	" 1, 1870,	"	1, 1871	111,782 65
"	" 1, 1871,	"	1, 1872	127,201 30
"	" 1, 1872,	"	1, 1873	146,117 32
"	" 1, 1873,	"	1, 1874	153,634 27
"	" 1, 1874,	"	1, 1875	138,880 37
"	" 1, 1875,	"	1, 1876	179,166 76
"	" 1, 1876,	"	1, 1877	154,843 59
"	" 1, 1877,	"	1, 1878	157,443 91
"	" 1, 1878,	"	1, 1879	164,681 90
"	" 1, 1879,	"	1, 1880	173,325 49
"	" 1, 1880,	"	1, 1881	170,062 73

The reduction of receipts this year, instead of a proportional increase, is caused by the City Council's reduction of hydrant rates from $30 each to $15 each per annum.

Comparative Statement.

	1880.		1881.	
Construction Account.				
Received	.....	$25,234 04		
Expended	.....	25,234 04	.....	$6,824 81
Supply Account.				
Received	.....	$3,762 52	.....	$3,710 78
Expended	.....	1,995 21	.....	2,928 68
Excess of receipts	.....	$1,767 31		$782 10
Maintenance Account.				
RECEIVED.				
Rates, Fines, etc	.....	$174,348 96		$170,897 23
EXPENDED.				
Care and Repairs	$25,865 49		$23,833 89	
Interest on Water Debt	91,585 00		91,585 00	
Paid to Sinking Fund Commissioners,	45,855 00		45,855 00	
		163,305 49		161,273 89
Excess of Receipts		$11,043 47		$9,623 34
Supply Account, Excess of Receipts		$1,767 31		$782 10
Maintenance Account, Excess of Receipts		11,043 47		9,623 34
		$12,810 78		$10,405 44
Deduct expended on Construction Account				6,824 81
Excess of Total Receipts over Total Expenses				$3,580 63

The matter of the amount due the Sinking Fund, alluded to in my last report, and by your board brought to the attention of the City Council, was then referred to the Committee on Finance, together with the City Solicitor's opinion that the Sinking Fund is entitled to all unexpended balances of receipts; but as yet, the account has not been audited as requested. Having brought my accounts to a definite total in the report for last year, I have included in this year's statement only receipts and expenditures since Nov. 30, 1880, adopting that as a starting point for any subsequent differences.

No action has been taken by the City Council during the past year upon the proposition to change the time for payment of water rates, although the same reasons still apply, and the complaints increase. Many citizens evidently expected the change this year.

As required by ordinance, all premises supplied with Fresh Pond water have been visited during the year, and a careful inspection has been maintained to prevent as far as possible a waste of water; but many householders still fail to appreciate the necessity of careful use of water, every gallon of which has to be pumped to such a height to enable them to enjoy its benefits.

Two hundred and one new supplies have been laid during the year, three being in place of former extensions from other supplies. Eighteen of the above were laid in the new territory annexed to Cambridge, formerly a part of the town of Belmont. Twenty of the new supplies have not yet been paid for, nor water let on.

One hundred and fifty-seven meters are now in use, an increase of only one over last year; nine having been placed in various locations during the year, and eight removed.

Besides the manufactories, etc., supplied by meter, water is now supplied to 11,076 families, 803 stables, with 2,005 horses and 277 cows, 231 shops, 269 stores and offices, by the following fixtures, viz.: —

13,314 faucets.	27 hopper closets.
3,639 wash basins.	60 urinals.
2,080 wash tubs.	71 yard hydrants.
1,930 bath tubs.	5 fountains.
4,666 pan closets.	3 tumbler washers.
754 slop closets.	905 hand hose.

Also, —

577 fire hydrants (besides 4 on private premises).
14 fire reservoirs.
15 drinking fountains in public squares.

The above is exclusive of the school-houses, engine houses, police stations, and other city buildings, for which special rates are charged, except where meters are located.

Respectfully submitted,

J. WARREN COTTON,
Registrar.

REPORT

OF THE

COMMITTEE ON ACCOUNTS OF THE CAMBRIDGE WATER BOARD.

We have examined the abstract of accounts as presented by the Water Registrar, covering the records of the past year. We have compared these with the statements submitted to us by the City Treasurer and Auditor, and we find them to agree. Annexed, in brief, is the financial statement presented to us by the Water Registrar, and verified by us.

Amount of bills in City Treasurer's hands uncollected Nov. 30, 1880: —			
For water rates		$328 66	
" meter rates		92 53	
" supplies and repairs		604 52	
			$1,025 71
Amount of bills deposited with City Treasurer for collection during the year ending Nov. 30, 1881: —			
For water rates		$140,139 47	
" meter rates		34,683 61	
" supplies and repairs		3,983 36	
" turning off and on, seals and fines .		690 50	
" rent of house at pipe yard . . .		144 00	
			179,640 94
Of these amounts the Treasurer has collected	$175,680 80		
Less refunded	1,072 79		
		$174,608 01	
Refunded as above		1,072 79	
Abated		3,886 92	
Balance uncollected, Nov. 30, 1881 . . .		1,098 93	
		$180,666 65	$180,666 65

JAMES M. W. HALL,
JAMES A. FOX,
} *Committee on Accounts.*

November 30, 1881.

REPORT

OF THE

SUPERINTENDENT OF THE WATER WORKS.

To the President and Members of the Cambridge Water Board:—

GENTLEMEN, — The annual report of your Superintendent upon the condition of the works and the operations of the past year is herein presented.

The total amount of water pumped is 902,319,300 gallons.

Coal consumed per million gallons pumped, 1,650.16 pounds.

Water sold by meter and that used for watering streets, 208,025,800 gallons; leaving as the amount for domestic use, 694,293,500 gallons.

Number of gallons daily for each inhabitant on whole amount pumped, $46\frac{3}{4}$ gallons.

Number of gallons daily for each inhabitant, on amount for domestic use, 36 gallons.

Spy and Little Ponds, Wellington Brook, and Conduit.

The gates are in good condition. No water has been drawn from Spy Pond. The water was analyzed with the usual result, — not fit for use. The filter basin appears to be in good condition; it has not been used since March last.

No change in the condition of Wellington Brook and its branches is apparent since my last report. Water was drawn from this source at all available times during the months of February, March, and April, but much of the storm water was lost on account of the drainage from Niles Brothers' muck heaps mingling with it. The amount of water wasted from this cause was great, and it is a serious evil that these muck heaps still remain to menace the Wellington Brook supply, from which source we ought to secure a large amount of water when the snow thaw comes in the spring.

No inspection of the conduit has been made, owing to the water being so high; it appears to be in good condition.

Fresh Pond.

The pond reached its lowest point on the 9th and 10th of February, — namely, 7.73 (the least height heretofore recorded or known), — when it became necessary to start the centrifugal pump, pumping into the conduit, as the pumps would just take the water. This extreme low water, happening in the cold weather, when we were having an excessive draught on account of water being run to waste to protect service pipes from freezing, would have put the city in a precarious situation if we had not had the connection with Boston pipes to fall back on. We were at this time depending on the small pump alone for the whole supply. This pump was run six days; in the mean time the pond commenced rising, and continued to gain gradually until April 18, when it reached its highest point for this year, — viz., 16.04.

At the present time it is 2.48 feet above the top of the conduit, being 3.16 feet higher than at the same time last year. Nothing has been done on the borders of the pond during the year. The water has been very clear and free from weeds. Slight repairs have been made on the house for the centrifugal pump, where it was damaged by the ice in the spring. This pump and engine are in good condition, and ready for immediate action should occasion require it.

The Engine House

Lot and Tudor Park have received the usual care. The grass has been cut, walks graded, and fences repaired. Nearly all the trees are in a flourishing condition. Both pumps have been painted and varnished; the two old boilers thoroughly repaired, all the tubes having been taken out and cleaned and large sheets put on over the fire boxes. The Engineer's report shows the condition of the engines and boilers.

Reservoir.

The iron fence around the basin has been painted, the grass cut, and walks kept in repair. The gates are in good condition.

There is no more leakage than at the date of my last report. Nothing has been done to the retaining wall except to point a few places where the frost had thrown the cement out. The retaining wall on the west side, near the north corner, should be repaired in the spring, as there is danger of the banks yielding, which would cause serious trouble. The chronograph is in perfect working order, and has run constantly during the year. By its record, our consumption during the night hours, from 12 to 4, is less than last year. The minimum fall of the reservoir water height, for these four hours during November, 1881, was 3.95 inches, equivalent to 137,175 gallons discharged, or 34,293 gallons hourly. Of this amount, 7,000 gallons are metered, leaving 27,293 gallons for consumption and waste, or a little more than two quarts per inhabitant per hour.

Distribution Pipes.

The most important extensions have been of four-inch and six-inch pipes in Mt. Auburn, Holworthy, and Locust Streets, Belmont District. As many calls for water have come from Cushing Street, and a long line of small pipe only is now laid, which it is not practicable to extend any farther unless it can be backed up by a return line, I recommend that an eight-inch pipe be laid from Elmwood Avenue, on Mt. Auburn Street, to and in Cushing Street. This would furnish a good supply to the whole district, and give fire protection also.

About two hundred feet of twelve-inch and twenty-inch pipe, on Front and Sydney Streets, have been raised on account of the new sewer; the four-inch main at Green and Sydney Streets was also cut and offset over the sewer. The pipe in Warren Street and Porter Street, from Warren to Bedford Streets, has been raised. It was intended to raise all of the pipes in this district, but from their being so deep, it would cost more to raise them than the laying of new pipe, so that project has been abandoned; and I recommend that a new pipe be laid in McCabe, Jefferson, and that portion of Porter Street not raised, since most of the supplies on these streets are seven and eight feet deep, and will have to be renewed.

New Supplies.

Two hundred and one new supplies have been laid during this season, making the present total 7,523. One hundred old supplies have been renewed, and 97 sidewalk shut-offs have been put on to old supplies. A total number of 416 leaks have been stopped; viz., 1 on thirty-inch pumping main, 2 on twenty-inch cement pipe, 2 on sixteen-inch pipe, 1 on twelve-inch pipe, 2 on ten-inch cement pipe, 1 on ten-inch iron pipe, 3 on eight-inch pipe, 4 on six-inch pipe, 23 on four-inch pipe, 85 on supply pipes, and 291 reported by the inspector and repaired by the owner or occupant.

I earnestly recommend the adoption of lead pipe for service in all of the marsh territory. Most of our leaks are on galvanized service pipes, which will not last more than three or four years in these localities.

A thorough inspection of all fixtures on premises has been made (except in Ward Five), with good results; and I have no doubt, if this inspection is persistently continued, our consumption may be kept where it is for a long time.

Sixty-four gate and 33 hydrant boxes have been set in place of decayed ones removed. The renewal of boxes is an important element in our maintenance account, and learning that kyanized spruce lumber had given good satisfaction in Lowell and Boston, that material is now being used.

Brookline Street Pipe Bridge.

A base board has been put on both sides of the bridge to prevent the action of ice from starting the sheathing, and the whole bridge has been painted.

Hydrants, etc.

Two new post and one flush hydrant have been set in new locations, and one post hydrant in place of a flush hydrant on Waterhouse Street at Garden. The present number is 582, of which 242 are post and 340 flush hydrants. The number of garden hydrants remains the same as last year.

Nine new meters have been set, and 8 have been removed. The present total is 157.

The number of drinking fountains and standpipes for street watering remains the same as at date of last report.

Pipe Yard.

The dwelling-house has been raised, a cellar dug, and a stone and brick foundation put in. The roof of the shed has been shingled, a new fence built in front of the house and painted. The buildings are now all in good repair.

Accompanying this report is that of the engineer at the pumping works, and tables showing the monthly amount and daily average of water pumped, the Fresh Pond record of water heights, the locations of standpipes and meters, the details of main and supply extensions, and the amount of stock on hand.

Respectfully submitted,

HIRAM NEVONS, *Superintendent.*

CAMBRIDGE, Dec. 5, 1881.

List of Meters in Use Nov. 30, 1881.

METERS.	Locality.	Size.	Description.
		Inches.	
Andrews, A. H.	Ninth St.	¾	Désper.
American Rubber Co.	Potter St.	4	Worthington.
American Net and Twine Co.	Third St.	1½	"
American Steam Safe Co.	Main St.	1	"
Badger & Daniels.	Thorndike St.	⅝	Union Rotary.
Baptist Church	Central Sq.	⅝	Worthington.
Bird, H. M. (Iron Foundry)	Broadway	⅝	Union Rotary.
Boston Bolt and Nut Co.	Portland St.	⅝	Désper.
Boston Woven Hose Co.	Broadway	⅝	Worthington.
Boston Stamping Co. (Tin Ware Manufactory).	Third St.	2	"
Boston Chemical Works.	Third St.	⅝	"
Boston & Lowell R. R. (Repair Shop)	Bridge St.	2	"
Boston & Lowell R. R. (Round House)	Prison Point St.	2	"
Boston & Lowell R. R. (New Round House)	Prison Point St.	2	Crown.
Boston & Lowell R. R. (Paint Shop)	Prison Point St.	1	Worthington.
Boston & Lowell R. R. (Filling Locomotives)	Prison Point St.	6	Union Rotary.
Broomhead, M. (Coffee Grinding)	Columbia St.	1	Worthington.
Bullock, O. S. (Machine Shop)	Broadway	1	"
Carr Brothers (Soap Factory)	Lopez St.	1	"
Capen, Sprague & Co. (Oil Works)	Sixth St.	¾	Désper.
Cambridge Skating Rink	Broadway	1½	Worthington.
Cambridgeport Diary Co.	Magazine St.	1	"
Cambridge Gas Light Co.	Third St.	2	"
Campbell Bros. (Boiler Factory)	Osborn St.	⅝	Désper.
City of Cambridge (Shepard School)	North Ave.	2	Worthington.
City of Cambridge (Ward One Building)	Brattle Sq.	2	"
City of Cambridge (Ward Four Building)	Central Sq.	1½	"
City of Cambridge (Cemetery)	Coolidge Ave.	4	"
City of Cambridge (Almshouse)	Tannery St.	2	"
Close, Geo. (Confectionery)	Broadway	1	"
Clark, B. P. & Co. (Confectionery)	Main St.	1½	"
Cochran, A. & Co. (Ammonia Factory)	Potter St.	¾	"
Coleman, John & Sons (Coal Wharf)	Broadway	1	"
Cooper's Car Wheel Co.	Hampshire St.	¾	"

List of Meters in Use Nov. 30, 1881. — *Continued.*

METERS.	Locality.	Size.	Description.
		Inches.	
Cofran, S. M. (Brick Yard)	Concord Ave	1½	Worthington.
Coolidge, J. G. (Floral Conservatory)	Coolidge Ave	1	"
Davis, Curtis & Co. (Soap Factory)	Broadway	1½	"
Davis, J. C. & Son (Soap Factory)	Broadway	1	"
Davis, Mason (Soap Factory)	Lincoln St	⅝	"
Dailey, Charles W. (Livery Stable)	Cambridge St	1	"
Downing, Theo. (Tannery)	Eustis Ct	1	"
Draper, F. & Co. (Brass Works)	Otis St	¾	"
Eastern Dredging Co	Western Ave	2	"
East Cambridge Club Stable	First St	1	"
Ela Brothers (Ivory Turning)	Broadway	1	"
Episcopal Theological Seminary Dormitory	Brattle St	1½	"
Fenton, N. & Co. (Mattress Factory)	Gore St	¾	Désper.
French, C. A. (Hotel)	Farwell Pl	1	Worthington.
Geldowsky, F. (Furniture Manufactory)	Otis St	1	"
Gilmore & Eustis (Cambridge Rolling Mill)	Portland St	2	"
Goepper Bros. (Barrel Factory)	Ninth St	2	"
Greene, A. T. & Co. (Manuf'y of Artists' Colors)	State St	⅝	Union Rotary.
Greely, Leander (Planing Mill)	Broadway	1½	Worthington.
Griffin & Dolan (Soap Factory)	Decatur St	¾	"
Harvard College (Boylston Hall)		1	"
Harvard College (Holworthy Hall)		¾	"
Harvard College (Stoughton Hall)		⅝	"
Harvard College (Seaver Hall)		1	"
Harvard College (Thayer Hall)		1½	"
Harvard College (In Yard)		1½	"
Harvard College (Memorial Hall)	Cambridge St	2	"
Harvard College (Boat-House)	Flagg St	¾	Ball & Fitts.
Harvard College (Botanical Garden)	Garden St	1	Worthington.
Harvard College (Gymnasium)	Cambridge St	1½	"
Harvard College (Holyoke House)	Harvard St	2	"
Harvard College (Museum Comp. Zoöl.)	Divinity Ave	1	"
Harvard College (Scientific School)	Kirkland St	⅝	Désper.
Hazlett, W. H. & Co. (Planing Mill)	Otis St	1½	Worthington.
Hale, Teele & Bisbee (Soap Factory)	Davis St	¾	Désper.
Hews, A. H. & Co. (Pottery)	Crescent Ave	1	Worthington.
Hixon, Edward & Co. (Furniture Manuf'y)	Harvard St	¾	"
Holmes, F. M., Manuf. Co. (Furniture)	Cambridge St	2	"
Houghton, H. O. & Co. (Publishers)	Blackstone St	2	"
Hovey & Co., North Side (Floral Conservatory)	Cambridge St	1	"
Hovey & Co., South Side (Floral Conservatory)	Cambridge St	1	"
Jaynes & Co. (Barrel Factory)	Pacific St	⅝	Ball & Fitts.
Jones, C. L. & Co. (Soap Factory)	Pearl St	¾	Worthington.
Kemp, L. & Son (Soap Factory)	Davis St	1	Ball & Fitts.
Kennedy, F. A. (Cracker Factory)	Green St	1	Désper.
Kendall & Roberts (Iron Works)	Main St	¾	Worthington.
Low, J. W. (Tannery)	Reed St	1½	"
Loan, J. J. (Soap Factory)	Columbia St	½	Union Rotary.
Little, Brown & Co. (Book Bindery)	Blackstone St	⅝	Worthington.
Lincoln & Chamberlain (Slaughter House)	Distillhouse St	¾	"
Mason & Hamlin Organ Co.	Broadway	1	"
Middlesex Bleachery (Dye Works)	Sacramento St	¾	"
Middlesex County (House of Correction)	Thorndike St	2	"
Middlesex County (Court House)	Thorndike St	¾	Ball & Fitts.
Middlesex County (Court House)	Otis St	¾	"
Middlesex County (Registry of Deeds)	Otis St	¾	Worthington.
Millian, Alex. (Fish Market)	Brattle St	½	Désper.
Moring, Mrs. A. L. (Beck Hall)	Main St	1	Worthington.
Mount Auburn Corp. (Floral Conservatory)	Brattle St	1	"
Mount Auburn Corp. (Cemetery)	Mt. Auburn St	¾	Désper.
Murdock, Walter H. (Floral Conservatory)	Grigg St	⅝	"
New England Glass Co	North St	2	Worthington.
Norton, E. H. (Soap Factory)	Winsor St	¾	Désper.
O'Brien, John (Slaughter House)	Beech Ave	1	Worthington.
Page, Geo. G. & Co. (Box Factory)	Hampshire St	2	"
Parry Bros. & Co. (Brick Yard)	Raymond St	⅝	"
Pike, James & Co. (Livery Stable)	Church St	1	"
Porcellian Club (Harvard Students)	Harvard St	⅝	Désper.
Porter's Hotel (Frank Locke)	North Ave	¾	"
Prospect House (Joseph Uhrig)	Main St	1½	Worthington.
Ross House (Mrs H. P. Ross)	Broadway	⅝	"
Reardon, John & Sons (Oleomargarine Fact'y)	Talbot St	4	"
Reardon, William (Soap Factory)	Portland St	⅝	Désper.

List of Meters in Use Nov. 30, 1881. — *Concluded.*

METERS.	Locality.	Size.	Description.
		Inches.	
Revere Sugar Refinery (South Side)	Water St.	3	Worthington.
Revere Sugar Refinery (North Side)	Water St.	3	Union Rotary.
Reversible Collar Co.	Mt. Auburn St.	1	Worthington.
Rhoades, Silas & Son (Planing Mill)	State St.	2	"
Rideout, M. E. & D. T. (Planing Mill)	Banks St.	¾	"
Roberts, O. P.	Brattle St.	1	"
Rogers, Geo. M.	Washington St.	3	"
Russ Moulding Co.	Thorndike St.	¾	Crown.
Sands, John L., estate of (Brick Yard)	Walden St.	¾	Worthington.
Sanborn, G. P. & Son (Pickling Factory)	Gore St.	¾	Désper.
Shorey, Geo. L. (Laundry)	Soden St.	1½	Worthington.
Shaw & Applin (Furniture Manufactory)	Bridge St.	1½	"
Smart, D. C. (Wood Turning)	Main St.	⅝	Désper.
Sortwell & Co. (Distillery)	Distillhouse St.	2	Worthington.
Squire, John P. & Co. (Slaughter House)	Gore St.	2	"
Squire, John P. & Co. (Slaughter House)	Gore St.	2	"
Squire, John P. & Co. (Stable)	Gore St.	1	"
St. Mary's Church	Norfolk St.	2	"
Stiles, John C. (Omnibus Stable)	Cambridge St.	2	"
Stiles, John C. (Watering Horses)	Inman Sq.	⅝	Désper.
Tower, Sylvester (Piano Key Manufactory)	Broadway	1	Worthington.
Tug "Henry Chapel" (Steamboat)	First St.	2	"
Thayer, Henry & Co. (Laboratory)	Broadway	2	"
Tribune Publishing Co.	Linden St.	⅝	Désper.
Tracey, M. F.	Brighton St.	1	"
Union Railway Co. (Washing Cars)	Dunster St	¾	Worthington.
Union Railway Co. (Repair Shop)	Dunster St.	¾	"
Union Railway Co. (Car House)	Dunster St.	⅝	"
Union Railway Co. (Wooden Stable)	Dunster St.	¾	"
Union Railway Co. (Brick Stable)	Dunster St.	1½	"
Union Railway Co. (North Side)	Cambridge St.	1	"
Union Railway Co. (South Side)	Cambridge St.	1	"
Union Railway Co. (Stable)	Baldwin St.	1	"
Union Railway Co. (Stable)	Mt. Auburn St.	1	"
Union Railway Co. (Stable)	Main St.	1	Union Rotary.
Union Railway Co. (Stable)	North Ave.	2	Worthington.
Union Railway Co. (Car House)	Cambridge, cor. Baldwin St.	1	"
Union Railway Co. (Stable)	River St.	1	"
Union Railway Co. (Stable)	Murray St.	1½	"
Union Railway Co. (Washing Cars)	Murray St.	1½	Crown.
Union Glass Co. (Packing Room)	Webster Ave.	¾	Désper.
Union Glass Co. (Pot Room)	Webster Ave.	1	Worthington.
Warren, J. H. (Felton Hall)	Cambridge St.	1½	"
Walworth Manufacturing Co.	Main St.	1½	"
Wellington, J. A. & Co. (Coal Wharf)	Fifth St.	⅝	"
Wilson, John & Son (Publishers)	Brattle Sq.	1	"
Woodbridge, S. F. (East Slaughter House)	Frank St.	1	"
Woodbridge, S. F. (West Slaughter House)	Frank St.	⅝	"
Woods, Geo. & Co. (Organ Factory)	Main St.	2	"
Wight & Scorgie (Marble Polishing)	Mt. Auburn St.	½	Désper.

List of Drinking Fountains, Nov. 30, 1881.

Bridge Street, junction of Cambridge Street.
Broadway, southwest corner of Norfolk Street.
Brattle Square, east side of Brewer's Block.
Brattle Street, junction of Fresh Pond Lane.
Cambridge, south corner of Fifth Street.
Central Square, west side.
Central Square, east side.
Fort Washington.

Hampshire Street, junction of Broadway.
Harvard Square, at the flag staff.
Inman Square, east side.
Main Street, junction of Front Street.
Main Street, junction of Mt. Auburn Street.
North Avenue, southwest corner of Walden Street.
North Avenue, north side, west of Cameron Street.
Putnam Avenue, southwest corner of Pearl Street.
Third Street, west side, north of Main Street.

List of Standpipes (for Street Watering), Nov. 30, 1881.

Brattle Street, near University Press.
Brattle Street, corner of Sparks Street.
Brattle Street, near Fayerweather Street.
Brattle Street, near Fresh Pond Lane.
Bridge Street, junction of Cambridge Street.
Broadway, near Third Street.
Broadway, corner of Sixth Street.
Broadway, corner of Winsor Street.
Broadway, junction of Hampshire Street.
Brookline Street, corner of Putnam Avenue.
Cambridge, near Warren Street.
Cambridge, near Winsor Street.
Cambridge, at Inman Square.
Columbia, near Austin Street.
Concord Avenue, at junction of Garden Street.
Dana, at corner of Chatham Street.
Dublin, near Fitchburg Railroad.
Gore, west of Third Street.
Green, near Western Avenue.
Harvard, corner of Prescott Street.
Inman, near Broadway.
Kirkland, near Quincy Street.
Main, near Portland Street.
Main, near Hancock Street.
Magazine, opposite Warland Street.
Mt. Auburn, near Athens Street.
North Avenue, near Common.

North Avenue, corner of Sacramento Street.
North Avenue, near Roseland Street.
North Avenue, near Beech Street.
North Avenue, near Spruce Street.
North Avenue, corner of Norris Street.
North Avenue, opposite Tannery Street.
Prison Point Street, opposite Round House.
Third Street, near Rogers Street.
Thorndike, near Third Street.
Western Avenue, near Howard Street.

New Main Pipe, laid for Extensions and Renewals, from Dec. 1, 1880, to Nov. 30, 1881, inclusive, with the Number of Gates and Fire Hydrants used.

LOCATION.	Iron Pipe.		Gates.		Fire Hydrants.	
	Size.	Length.	No.	Size.	No.	Size.
	Inch.	Feet.		Inch.		Inch.
Fairmont Ave	4	216				
Pearl Street, west from Tufts Street	4	234				
Charles Street, from Sixth to Fifth Street	6	470	1	6		
Greenough Ave., east from Ellsworth Ave	4	150	1	4		
Mt. Auburn St. (Belmont District)	4	108	1	4		
Mt. Auburn Street, under railroad track to Holworthy Street	4	203	1	6		
Holworthy Street	4	695				
Holworthy Street	6	394	..	..	1	6
Locust Street	6	331	..	..	1	6
Cushing Street, at Locust Street	8	36				
Elm Street, south from Broadway	4	144				
Bay Street, north from Franklin Street	4	108	1	4		
Magazine Street, at Central Square	1	92				
Waverly Street, east from Allston Street	1¼	455				
Second Street, south from Spring Street	4	240				
Holly Street	1½	34				
Ninth Street, north from Binney Street	1½	142				
Hawthorn Street	4	259	1	4		
Maynard Place	1½	175				
Green Street, north side of Sydney Street	..	.....	1	4		
Spring and Ninth Streets	..	.....	..	..	1	3 Flush
Hastings Square, west	4	36				
Kirkland Place (Belmont District)	1¼	153				
Kirkland Place (Belmont District)	1	51				
Eliot Square	..	.....	1	4		

Recapitulation.

	8 in.	6 in.	4 in.	1½ in.	1¼ in.	1 in.	Totals.
Length of iron pipe in feet	36	1,195	2,393	351	608	143	4,726
Number of gates	.....	2	6	....	....	....	8
Hydrants	.....	....	....	....	....	....	3

Statement of Stock on Hand, Dec. 1, 1881.

For Street Mains (Iron Pipe and Fittings).

Number of —	48 in.	30 in.	24 in.	20 in.	16 in.	12 in.	10 in.	8 in.	6 in.	4 in.	3 in.
Straight pipes (12 feet each)	2	25	..	17	16	23	110	2	131	93	..
Elbows	..	..	..	..	2	..	2	..	..	..	..
Bends (1 36″)	..	..	2	2	..	..	10	..	13	..	..
Y Branches	..	..	1	..	..	1	..	..	..	..	..
Sleeves	..	2	4	8	2	2	2	1	5	8	11
Clamp sleeves	..	..	3	2	..	4	4	5	3	3	6
Drain offsets	..	..	..	..	..	..	..	..	21	..	..
Offsets	..	..	..	..	..	..	6	..	7	7	..
Gates	..	..	..	..	..	3	1	..	1	2	1
Check-valves (old)	..	..	2	..	..	..	..	..	..	..	..
Blow-off branches	..	..	..	2-6″	..	..	..	..	..	..	..
Caps	..	..	2	..	2	7	5	3	2	6	..
Plugs	..	..	..	..	..	1	1	2	1	..	..
Crosses	..	..	..	..	1-12″	4-3″	7-6″	..	..	..	..
	..	..	..	1-20″	..	..	..	1-8″	10-4″	16-4″	..
	..	..	..	..	3-6″	1-4″	2-8″	..	..	..	..
	..	..	..	2-10″	..	..	..	..	5-6″	..	..
	..	..	..	..	..	6-6″	2-10″	..	..	..	..
	..	..	..	..	..	5-10″	..	..	..	..	..
Reducers	..	..	1-10″	2-12″	1-6″	2-10″	8-8″	6-6″	9-4″	6-3″	..
	..	..	1-8″	1-8″	..	1-6″	3-6″	..	..	..	..
T's	..	..	1-8″	3-20″	1-6″	8-10″	4-8″	13-6″	11-6″	..	..
	..	..	1-24″	2-6″	..	6-6″	19-6″	2-4″	8-4″	15-4″	..
	..	..	3-6″	2-12″	..	5-4″	10-10″	4-8″	..	..	..

For Supplies (Galvanized Pipe and Brass Fittings).

	2½ in.	2 in.	1½ in.	1¼ in.	1 in.	¾ in.	½ in.
Length of galvanized pipe	16	17	15	13	45	285	
Elbows	..	24	20	10	6	53	22
Street elbows	..	...	....	...	...	60	
Couplings	..	100	11	9	100	40	54
Unions for lead pipe	..	...	....	...	...	20	
Unions	..	8	4	16	15	73	24
Stop and wastes	..	1	....	...	23	35	
Screw cocks	..	1	....	...	4	45	
Sidewalk cocks	..	...	....	...	4	20	
Screw cocks for cement pipes	..	...	5	...	56	2	
Blow-off cocks	..	...	6	...	...	....	
Hose bibbs	..	...	....	...	13	5	19
Air chambers	..	...	....	...	56	....	95
Socket end of rods	..	...	....	...	...	25	
Nipples	2	30	20	50	20	15	67
Plugs	..	...	7	1	25	9	
Bushings	2	9	10	15	60	16	6
T's, malleable iron	..	...	....	...	6	60	44
T's, cast iron	..	280	120	100	100	400	
Crosses	..	70	110	90	80	30	
Reducing couplings	..	...	....	...	...	94	
Caps	..	...	....	...	...	....	24

Standpipes, 11.

New Supplies.

GALVANIZED PIPE AND BRASS FITTINGS, USED FROM DEC. 1, 1880, TO NOV. 30, 1881, INCLUSIVE.

	4 in.	2 in.	1½ in.	1¼ in.	1 in.	¾ in.	½ in.	Total.
Length of galvanized pipe ...	53	132	150	153	593	7,499	..	8,580
Number of supplies.....	1	3	1	3	6	187	..	201
Number of stop and wastes..	..	2	...	3	6	186	..	197
Number of screw cocks.....	..	3	...	4	4	164	..	175
Number of sidewalk cocks...	..	...	...	...	2	178	..	180
Number of faucets.....	..	...	...	...	...	3	19	22
Number of standpipes.....	..	...	...	...	...	....	..	186

Stock in Shop and at Yard.

2 horses.
4 wagons.
3 harnesses.
1 double-runner sled.
1 pung.
4 blankets.
2 oil covers for horses.
1 hay cutter.
1 large boom derrick.
1 breast derrick.
3 small derricks.
1 lathe with the usual chucks and tools.
1 platform scale.
1 water motor.
1 pipe-threading machine with dies from ½″ to 2″.
2 die plates from 1¼″ to 2″.
4 plates from ½″ to 1″.
1 set of pipe taps from ½″ to 2″.
1 drilling machine.
1 large hand pump.
8 thawing pumps.
2 hydrant wrenches.
9 pipe wrenches.
3 monkey wrenches.
1 breast drill.
2 tapping machines for supplies.
3 2″ cock wrenches.
2 1″ cock wrenches.
6 sidewalk cock wrenches.
12 gate wrenches.
3 blow-off wrenches.
8 pairs of tongs.
7 pipe cutters.
4 tool chests.
14 lanterns.
2 bench vises.
5 rammers.
25 picks.
30 shovels.
4 chains.
2 hand carts.
3 lead kettles and furnaces.
8 pails.
242 seals.
350 pounds of lead.
3 inside parts of post hydrants.
3 garden hydrants.

25 old flush hydrants.
3 drinking fountains.
4 hydrant boxes.
15 small gate boxes.
13 large gate boxes.
5 2″ cock boxes.
5 large frames and covers.
4 small frames and covers.
1½ barrels of cement.
2 screws for raising main pipe.
120 risers for gate boxes.
2 2″ meters.
5 ⅝″ meters.
3 2″ counter and ratchet movements.
2 1½″ counter and ratchet movements.
2 1″ counter and ratchet movements.
3 ⅝″ counter and ratchet movements.
6 2″ meter dials.
2 1½″ meter dials.
5 1″ meter dials.
6 ⅝″ meter dials.

REPORT

OF THE

ENGINEER AT THE PUMPING STATION.

PUMPING STATION, CAMBRIDGE WATER WORKS,
CAMBRIDGE, Dec. 1, 1881.

Hiram Nevons, Esq., Supt. Cambridge Water Works: —

SIR, — During the past year the engines have required only the usual running repairs. Both engines have been painted and varnished. Boilers Nos. 3 and 4, which have been in use for thirteen years, began during the past year to show signs of failing; the sheets at the joints in the furnaces cracking from the rivets out to the edges of the sheets. The tubes have been taken out, scaled, and pieced out; the furnace sheets cut out, and new ones double the length of the old ones put in, doing away with joints directly over the fire. The furnaces have been relined with fire-brick, and new mouthpieces put in. These boilers are now in good condition, and will probably last for several years. The other boilers are in good condition, and will not require more than the usual repairs the coming year.

The auxiliary engine and pump are in perfect order, and ready for use at short notice. Following will be found a statement of the expenses at the pumping station, together with the engine record, pond levels, and rainfall for the past year; also a list of stock, tools, etc., on hand.

E. C. BROOKS, *Engineer.*

Statement.

$664\frac{640}{2240}$ tons Cumberland coal, @ $5.74	$3,815 56
Oil, waste, packing, etc.	225 09
Salaries	3,341 25
Repairs on engines and boilers	885 18
Tools	6 00
Repairs on buildings and care of grounds	120 72
Total	$8,393 80

Engine Record, Pond Levels, and Rainfall.

DATE.	Total Running Time.		Daily Average Running Time.		Total Coal consumed.	Daily Av. Coal consumed.	Total Water pumped.	Daily Average Water pumped.	Average Height of Pond.	Rainfall.
	Hours.	Min.	Hours.	Min.	Pounds.	Pounds.	Gallons.	Gallons.	Feet.	Inches.
December, 1880	336	50	10	52	120,000	3,871	69,891,900	2,254,577	8.33	1.98
January, 1881	391	0	12	37	141,600	4,568	81,885,300	2,641,461	8.30	5.03
February, "	373	45	13	21	129,200	4,614	75,468,000	2,695,286	8.65	4.14
March, "	336	15	10	51	119,000	3,839	68,148,000	2,198,323	14.20	6.07
April, "	317	5	10	34	111,900	3,730	67,557,000	2,251,900	15.87	1.83
May, "	357	30	11	32	116,700	3,765	77,748,600	2,508,019	15.59	3.32
June, "	365	45	12	11	118,300	3,943	78,227,100	2,607,570	15.13	6.27
July, "	383	20	12	22	130,000	4,194	81,523,200	2,629,780	14.49	3.41
August, "	382	10	12	19	129,500	4,177	82,938,900	2,675,448	13.61	1.13
September, "	363	30	12	7	127,900	4,263	78,396,600	2,613,220	12.78	2.74
October, "	349	20	11	16	128,700	4,152	74,116,500	2,390,858	11.98	2.85
November, "	314	50	10	30	116,200	3,873	66,418,200	2,213,940	11.62	4.08
Total	4,271	20	...	...	1,489,000	....	902,319,300	.....	..	42.85
Daily average	11	42	...	...	4,079.4	....	2,472,108	.....	12.55	

Stock on Hand, Dec. 1, 1881.

453$\frac{2}{2}\frac{1}{2}\frac{9}{4}\frac{0}{0}$ tons Cumberland coal; 35 gallons cylinder oil; 20 gallons machine oil; 3 gallons kerosene; $1\frac{1}{2}$ gallons benzine; $\frac{1}{2}$ gallon boiled oil; 1 gallon raw oil; $\frac{3}{4}$ gallon oil polish; 50 pounds cotton waste; 20 pounds rubber packing; 2 sheets asbestos packing; 10 pounds hemp packing; 3 pounds Tuck's packing; 6 cylinder-head gaskets; 24 9-inch rubber valves; 2 valve seats; 2 steam gauges; 12 pounds Babbitt metal; 1 pound solder; 2 pounds red lead; 10 pounds steel; 5 pounds sheet brass; $1\frac{1}{4}$ bales hair felt; 8 pounds soap; 15 feet 5-inch belting; 8 files; $1\frac{1}{2}$ pounds emery; $\frac{1}{4}$ quire emery cloth; 2 gauge glasses; 8 lamp chimneys; 2 dozen lamp wicks; 2 lantern globes; $\frac{1}{4}$ barrel brimstone; 300 pounds bolts and nuts; 1 pair plungers and rings for No. 2 engine; 20 feet 2-inch brass pipe; 30 feet $1\frac{1}{4}$-inch brass pipe; 7 feet $\frac{1}{2}$-inch brass pipe; 12 feet $\frac{1}{4}$-inch brass pipe; 6 feet 3-inch iron pipe; 20 feet $1\frac{1}{4}$-inch iron pipe; 20 feet $\frac{3}{4}$-inch iron pipe; 40 feet $\frac{1}{4}$-inch iron pipe; 3 $1\frac{1}{2}$-inch globe valves; 25 elbows; 15 T's; 8 unions; 20 nipples; 24 plugs; 30 couplings; 2 crosses; 20 bushings; 10 feet 24-inch flange pipe; 8 feet 6-inch flange pipe.

Tools, Furniture, and Instruments.

1 18-inch × 10-foot engine lathe; 1 lathe chuck; 6 lathe dogs; 18 lathe tools; 1 grindstone; 1 3 × 9 engine, with shafting, belting, etc.; 1 vise and vise bench; 1 set pipe dies; 1 set pipe taps; 2 pipe cutters; 14 pairs pipe tongs; 1 set hand taps; 2 hand hammers; 1 copper hammer; 18 cold chisels; 8 files; 5 screw wrenches; 1 hack saw; 1 Stillson wrench; 22 fork wrenches; 27 socket wrenches; 1 hydrant wrench; 6 gate wrenches; 2 clamp screws; 2 sledges; 2 ratchets; 18 drills; 1 breast drill; 2 jack screws; 6 steel bars; 2 soldering irons; 4 cylinder head cranes; 1 level; 1 gasket cutter; 2 ladles; 12 eye bolts; 75 starting bolts; 2 starting keys; 1 chain fall; 2 wooden horses; 1 oil cabinet; 1 set measures; 1 10-gallon can; 1 6-gallon can; 3 3-gallon cans; 3 1-gallon cans; 2 lamp fillers; 2 funnels; 4 squirt cans; 1 oil pump; 1 carpenter's bench; 4 planes; 4 hand saws; 10 chisels; 7

gouges; 3 screw drivers; 2 bit stocks; 13 bits; 4 augers; 1 draw knife; 1 spoke shave; 2 axes; 2 mallets; 1 steel square; 1 set fire tools; 1 coal car; 1 pair platform scales; 1 wheelbarrow; 11 scoop shovels; 4 long-handled shovels; 3 picks; 1 tube brush; 1 forge; 1 anvil; 5 pairs tongs; 2 hand chisels; 1 lawn mower; 2 steel rakes; 2 wooden rakes; 1 scythe; 3 forks; 1 weeder; 1 spade; 6 ladders; 3 step ladders; 1 cast-iron roller; 200 feet 2-inch hose and pipe; 100 feet $\frac{3}{4}$-inch hose and pipe; 1 desk; 2 tables; 2 clocks; 18 chairs; 9 mats; 6 spittoons; 1 water cooler; 6 fire pails; 5 water pails; 4 bracket lamps; 4 lanterns; 2 hand lamps; 1 lot cocoa matting; 1 watering pot; 1 dust-pan; 2 dust brushes; 1 window brush; 1 floor brush; 2 scrubbing brushes; 2 mops; 2 brooms.

Tools, Furniture, etc., at Engine House at Pond.

1 12-inch × 20-inch portable engine and boiler; 1 12-inch centrifugal pump and belt; 1 hand force pump; 1 stove and pipe; 30 feet 1-inch hose; 10 feet $\frac{3}{4}$-inch steam hose; 1 set fire tools; 2 oil cans; 2 bracket lamps; 2 chairs; 1 cot bed and bedding.

REPORT

OF THE

SCHOOL COMMITTEE FOR 1881.

THE School Committee for 1881 presents the following report, prepared mainly by the several subcommittees of the board. There are evident advantages in this method, since each subcommittee must have a more intimate knowledge of matters pertaining to its own department than any special committee can be presumed to have of all the departments of our school system.

In accordance with this plan, the several reports are arranged in the same order as those of last year.

The High School.

The High School, which for many years has ranked among the first of its class in the State, is still in a prosperous condition.

During the year, a change has taken place in the head mastership of the school, caused by the resignation of Mr. Williston on account of ill health. His resignation was a surprise to the committee, who had fondly hoped that he might be able to continue his connection with the school; but his high sense of duty would not permit him to remain in a position for which he felt his health to be insufficient. But while recognizing the faithful and valuable services of Mr. Williston, it is but a simple act of justice to say that, under its present management, the school is fully sustaining its high reputation. Mr. Bradbury has been connected with the school for a long time, understands well its wants, and his efficiency is manifest in every department.

The general organization of the school remains the same as in years past; but by a change in the position of the philosophical room from the first to the second floor, much has been

done to prevent the confusion and waste of time incidental to the change of classes, which frequently involved a passage up or down two or three flights of stairs.

More use is made of the chemical laboratory than has been done for some years. In this room there are working places for sixteen pupils. The privilege of one exercise a week in chemical manipulation, under the direction of Mr. Orne, teacher of physics, was offered to the first class (English course). Though this additional hour is voluntary on the part of the pupils, two sets or more than thirty pupils are availing themselves of the opportunity to become practically acquainted with this important branch.

The Training School.

The Training School continues to maintain its high standing. Eleven graduated from the school last year, several of whom are now teaching in our primary schools; while others are availing themselves of the order of the School Committee, allowing them to act in the schools as assistants without pay. This keeps them in school, where they see the methods of various teachers; and it helps them also to become acquainted with the actual work of the school-room. As yet no one has applied for the benefits of the post-graduate year. Those who graduate successfully in one year are impatient to get into teaching work; and if the opportunity comes, feel that they cannot decline it in favor of another year of training. Those who do not succeed, do not care to prolong the trial. The principal reports that she can already see the benefit of a fixed standard for admission.

The City School.

The number of scholars in the City School is thirty-four; seventeen of them sentenced for truancy, the remaining seventeen being of the city poor. The classes represented by these children are the first, second, and third primary; fourth, fifth, and sixth grammar.

The school is under the charge of Miss Gushee, during the absence of Miss Butler, who is making a tour in Europe. There is but little difference in the management and instruction

from year to year; and considering the material of the school, and the change continually going on by the expiration of the sentence of the boys, good progress is made.

Drawing.

The term of the evening drawing schools closed April 12, 1881.

Mechanical Drawing class, whole number registered	63
Average attendance	28
Freehand class, whole number	96
Average attendance	39

The same teachers were employed in these schools this year as last. The committee regret to see that the average attendance is less than fifty per cent of the number registered. It would seem that the age of those for whom this school is maintained should warrant us in expecting such an attendance as will show that it is appreciated.

Truant Officers.

As predicted last year, the public are slowly but steadily growing to accept these officers as necessary to the successful and efficient working of the public-school system. They are not, as formerly, misjudged and found fault with. The committee have had no complaints against them, either from parents or teachers.

We therefore take pleasure in saying to the public that these officers have been faithful, earnest, and gentlemanly in the discharge of their duties.

Examination of Teachers.

Twenty-seven nominations have been referred to the Committee on Examination of Teachers, during the year. Ten of them were for positions in the grammar schools, sixteen for the primary schools, and one for the City School. Of these nominations the committee has reported favorably upon twenty-one, and they have been confirmed by the full board. There are yet three to be visited by the committee, having been nominated at the December meeting; and three are still in the hands of the committee, their work, so far, not proving satisfactory.

It is the policy of this committee to give all teachers a fair opportunity to show their ability to teach and manage a school.

The success of the teachers that have been nominated during the year has been generally so satisfactory as to justify confirmation. It should be stated, however, that in several instances, teachers who had had no experience, if finally successful, became so only as they obtained experience in the school-room. In the mean time the classes under their tuition suffered the consequences of their teachers' inexperience. Those placed in the grammar schools, being generally teachers who had had a successful experience elsewhere, have as a rule manifested marked ability as teachers and disciplinarians. In the primary schools we are compelled to appoint young and inexperienced teachers, and in some cases the standard of this grade is not as high as it ought to be. Young ladies who graduate from our high and training schools are not all of them fitted to teach. The training school cannot make teachers, unless those who take its course of study have something of the teacher by nature. If we are not careful in the selection and appointment of teachers for our primary schools, the future will show a deficiency in this department. The schools of Cambridge exist for the good of the children, and not for the purpose of giving places to inefficient teachers, even though they may be residents of the city. The Committee on Examination of Teachers must always bear this fact in mind.

School-Houses and Hygiene.

It is much to be regretted that most of the hygienic conditions of our school-houses mentioned in the report made by a special committee to the School Board in 1876, exist at the present time. In many instances, the five years which have passed have greatly increased the bad state of things then existing.

During the past year, much improvement has been observed in work done by the janitors. This gives reason to expect that much more improvement may take place in the same direction.

Our earnest hope is that in the near future, the sanitary condition of our school-houses, in all its bearings, may receive from the proper authorities that care and attention which the importance of the subject so much deserves.

Salaries.

Six years ago this board entered upon a gradual reduction of salaries, which at that time had reached a seemingly extravagant figure, through the peculiar exigencies of the times, induced in part by important changes in our school system, and incidents growing out of the war, with the consequent inflations in prices and enhanced cost of living.

In the interim between 1873 and 1875, a radical change having taken place in the general economy of the country, it was deemed expedient to apply the pruning knife in the financial management of several departments of our municipal affairs; and among others was that of the schools.

Between 1875 and 1881, the cost of instruction per pupil was reduced from $23.02 to $17.82, a reduction of $5.20 per pupil. Thus the cost of instruction has been reduced to the minimum, and almost in the ratio of the decrease in the cost of maintaining the schools, with all their incidental and running expenses.

The total cost of the schools, not including expenditures for new school-houses and alterations, has been reduced from $212,960.72 in 1875, to $158,282.84 in 1881; and while the cost in 1881 exceeded that in 1879 by a few hundreds, the cost per pupil was $1.44 less than in that year.

It is a gratifying reflection, in connection with the reduction in salaries, as well as in the gross cost of maintaining the day schools, that the standard of our schools in no department has been lowered; but on the contrary, viewed in the light of acknowledged results, their measure of excellence has been enlarged and strengthened.

We are not unmindful of the fact that with the increased growth of the city during the past decade, but more especially since 1876, there has been a proportionate and imperative demand for new school facilities; yet during that period the cost of instruction per pupil has been decreased, as compared with previous years, but not at the expense of the efficiency of the schools.

The wisdom of the reduction of salaries, beginning with 1876, cannot, we think, be questioned; but the policy then

inaugurated appears to have been productive of good results, and to have received the public approbation.

In conclusion, the Committee on Salaries recommends that there be no increase in salaries during the year 1882, profoundly believing that both the potency and standard of our schools can be well maintained under the existing salary list; but at the same time your committee would not lose sight of the fact that, independent of the salaries paid, the efficiency of our school system is in a large measure due to the suggestions and supervision of our superintendent.

Text-Books.

The rules of the board require an annual examination of text-books and courses of instruction, with a view to such changes as may be desirable. For the past few years, the changes recommended have been inconsiderable; for the committees in charge have been indifferent to the advantages of mere novelty, and have been disposed, besides, to lay less weight upon the books used than upon the wisdom with which the teacher should use them. The changes made during the past year have been but three, two of these being the substitution of improved editions of books long in use, and the third the dropping of one book from certain classes where its use was no longer regarded as important. The policy which has been pursued seems still to be a wise one, — to avoid sweeping or frequent changes, but to study the adaptation of books to classes, and to adopt simple and natural means for keeping the instruction fresh and interesting.

In accordance with the plan which has been regularly pursued by the board for the last few years, the Committee on Text-Books has provided a few books for supplementary reading, by which the scope of reading, especially in the lower classes, has been enlarged, an interest awakened in good literature, and the regular text-books in this department rendered more serviceable by being confined to their use as drill books. By a moderate expenditure for a few years, it will be possible to accumulate a convenient stock of books, which, by judicious distribution, can be made to answer the purpose of a large number.

Music.

The Committee on Music has little to report. The methods of instruction and their results have been the same as in former years. Fortunately, it is no longer necessary to defend or to apologize for the study of music in our schools.

The committee, while expressing its own satisfaction, can congratulate the city upon the fact that in the list of studies pursued in the public schools, a place has been given to the art which exerts so powerful an influence upon the happiness of the family and the individual, — which can still cause "the evil spirit to depart" as it did in the days of David and King Saul.

It is but repeating the substance of former reports to say that the lessons in singing are not taught in a perfunctory manner, but thoroughly and earnestly, by a master who is an enthusiast in his profession, and who brings to his work the training of a careful and liberal education.

Of the teachers under his direction, while some have shown superior zeal and skill, all, it is believed, have carried out his instructions with fidelity and with a fair measure of success.

From these reports it will be seen that the interests of the schools have been carefully attended to by the several sub-committees, and we are glad to be able to report that the condition of our schools is on the whole gratifying. It is, however, important above all things that we should recognize the fact that they are not perfect, either in organization or instruction.

In some respects we may congratulate ourselves that we are in advance of most cities and large towns in the State. Corporal punishment has been reduced to a minimum in our schools, by the wise regulations of the committee and the judicious management of teachers. Doubtless, also, better and more interesting methods of teaching have contributed to this desirable result. It is only, however, by constant vigilance and untiring patience, aided by good judgment and tact on the part of teachers, with the hearty support of parents and guardians, that this state of things can be maintained.

And this would seem to furnish good grounds for such an organization of our grammar schools especially, as will, under all circumstances, afford the most efficient corps of teachers. In our primary schools, and among the assistants in our grammar schools, we recognize the fact that teachers are liable to be absent for an indefinite time, and make provision for substitutes.

Not so with the master. In case of his absence for a day or week, or even longer, there is no such provision. It is only when sickness or other cause takes him from his duties for a considerable time that a substitute is provided.

This leaves the whole responsibility of the discipline of some five hundred boys and girls with female teachers, who certainly cannot, with propriety, be required to supervise boys during recess, and are liable at any time to be called upon to perform duties fit only for a man. For these and other reasons, it seems proper to suggest that a submaster might profitably be employed in each of our large grammar schools.

The additional expense would be inconsiderable, — not more, probably, than three hundred dollars in each school. There are many young men of good education, some experience, and of excellent promise, who would be glad to take such a position for a salary of a thousand dollars, knowing that eminent success in a subordinate place would open to them, not only in Cambridge, but in the neighboring cities, opportunities for promotion.

The ratio of female to male teachers in the schools of this country has been a subject of discussion in most educational bodies, and the best opinion seems to be that the proportion of male teachers for pupils from nine or ten to fourteen or fifteen years of age is smaller than the best interests of the schools require.

Another matter worthy of attention, and one on which the character and standing of our schools must depend, is the means by which we shall supply the vacancies that are constantly occurring in our corps of teachers.

It is believed that the salaries paid in Cambridge, and the desirableness of a situation in the immediate vicinity of Boston, would enable us to fill any vacancy that may occur in our

schools with a teacher who has had a successful experience elsewhere, and whose immediate success here would be at once assured.

At present, "preferred candidates for all vacancies among the female teachers in the primary and grammar schools" are those who have had little or no experience.

Practically, this preference seems to have been acted upon chiefly in filling vacancies in the primary rather than the grammar schools. Indeed, there are not wanting instances where teachers, having begun in primary schools and shown ability to discipline and teach, have been transferred to grammar schools. It is evident that this policy, if continued, must result in giving us an inferior class of teachers in our primary schools.

If there is any principle on which experts in educational matters are agreed, it is that to secure the best results of our system of public instruction, our primary schools must have teachers in no way inferior, both in judgment and aptitude, to those in the grammar schools. Weakness in the foundation is sure to reveal itself in the superstructure.

It will be admitted, as an abstract proposition, that it is the duty of the committee to fill every vacancy that may occur with the best teacher that the salary will secure.

Perhaps, also, a more heroic use of the pruning knife might promote the interest of some schools. Still, we know how difficult and painful it is to remove a teacher whom every one respects, however unsatisfactory his work may be; hence the necessity of the greatest care in making appointments.

With regard to the instruction in our schools, it is believed that great improvement has been made during the last few years. This is due, to a considerable extent, to better supervision. The appointment of a faithful and judicious superintendent has done much to make the instruction more practical and interesting.

Nor has this improvement been confined to our own city. Criticisms which have been made from time to time, whether just or unjust, discriminating or otherwise, have aroused such a spirit of inquiry among the best teachers that educational periodicals and treatises on teaching are read with avidity wherever a public-school system exists. In addition to these, teachers'

institutes and conventions are better attended than at any previous period.

Since Saturday has been made a holiday in Boston, lectures on natural history and methods of teaching it have been attended by hundreds of teachers. Last winter, Dr. G. Stanley Hall, under the auspices of Harvard University, delivered a course of lectures in Wesleyan Hall, Boston, that gave great satisfaction to many teachers. This winter he will give another course on the "Education of the Eye, the Ear, the Memory, and the Mental Growth of Children." These subjects, under his treatment, cannot fail to be of great interest and value to teachers in every grade of our schools.

It was partly that our teachers might have an opportunity to share these means of improvement, that the committee was induced to try the experiment of making a whole holiday of Saturday, which has proved so satisfactory elsewhere. The fears that we have heard expressed in some quarters that teachers might be *required* to attend these lectures, are entirely groundless. Compulsory attendance has not been required in Boston and other places, and we will not presume that the teachers of Cambridge are less anxious to avail themselves of opportunities for improvement than others.

This increased activity among teachers shows that they are fully aware that there is still much room for improvement; and we may add that there will be until we can put a teacher in every class who knows not only *how* to teach, but *what* to teach, and especially what *not* to teach. It is safe to say that most text-books contain more of what should only be read and talked about than what should be assigned as a lesson and absolutely fixed in the memory. Not that everything should be expunged from the text-book which is not to be thus fixed. Much in our geographies and histories, which should never be assigned as a lesson, must remain there, to be *read* as explanatory of important facts or principles. And here is the point where the best teaching shows itself, in giving what has been aptly called a "due perspective."

What Lord Bacon says of books in general is true of the parts of the same book. "Some books," he says, "are to be tasted, others to be swallowed, and some to be chewed and

digested; that is, some books are to be read only in parts, others to be read, but not curiously, and some few to be read wholly, and with diligence and attention." What parts of the text-books are to be "tasted," "swallowed," "chewed and digested," it is the province of teachers to decide; nor need they fear that examination papers, prepared or approved by a judicious superintendent, will do them injustice. They are much more likely to confirm the judgment of the teacher.

A course of study such as we have is of great value in giving unity to the instruction in the several schools; but if taken by teachers as a fixed and definite guide, leaving nothing to their judgment, the course of study becomes a hindrance.

That it is not intended to be an arbitrary rule, relieving teachers of the responsibility of exercising their judgment, is fully recognized by the statement that "teachers will omit, or pass rapidly over, parts comparatively unimportant, and dwell upon the more important subjects, *using the text-books as aids only*."

In closing this report, the committee would urge upon parents and guardians the duty of a hearty co-operation with teachers, as a means of giving efficiency to their labors. We invite even judicious and friendly criticism, and all the more because in order to make a judicious criticism it will be necessary to visit the schools not only on public occasions, but while engaged in their regular work.

JAMES A. FOX, *Chairman, ex officio.*
HORACE E. SCUDDER,
JOHN L. HILDRETH,
PHEBE M. KENDALL,
JAMES H. HALL,
BENJAMIN F. TWEED,
JOHN O'BRIEN,
OTIS S. BROWN,
EDWARD B. MALLEY,
SARAH S. JACOBS,
WILLIAM H. ORCUTT,
ASA P. MORSE,
WM. FOX RICHARDSON,
EDMUND H. STEVENS,
WILLIAM A. START,
} *School Committee.*

TABULAR VIEW

OF

THE PUBLIC SCHOOLS OF CAMBRIDGE,

JANUARY 1, 1882.

Name of School.	Teachers.	Salary.	No. of Scholars, Jan. 1, 1882.
High School,	William F. Bradbury....	$2,800	446
	John Orne, Jr.....	1,700	
	Theodore P. Adams	2,000	
	Solon F. Whitney.....	1,700	
	Edwin L. Sargent.....	1,600	
	Mary F. Pierce	900	
	Emma A. Scudder	800	
	Hannah Gleason	800	
	Emma F. Munroe	800	
	Mary C. C. Goddard.....	800	
	Margarette M. Leighton..	800	
	Louisa P. Parker..	800	
Allston Grammar,	Benjamin W. Roberts....	1,900	507
	Emily R. Pitkin.....	620	
	Hannah L. Hill	620	
	Ida G. Smith.....	620	
	Caroline Close	620	
	Lizzie M. Dickson.....	620	
	Emma A. Eaton	620	
	Ella S. Danforth.....	620	
	Mary K. Bush	570	
	Melissa M. McKinley....	570	
	Mary J. Vinton.....	520	
	Carrie M. Williams.....	520	
Corlett Grammar,	Fannie P. Browning.....	620	57
	Emma C. Edson.....	570	
Harvard Grammar,	James S. Barrell	1,900	582
	Ada H. Wellington.....	700	
	Margaret B Wellington..	620	
	Susan F. Athearn	620	
	Margaret R. Hodgkins...	620	
	Annie M. Leland.....	620	
	Susan E. Merrill	620	
	Emily F. Damon.....	620	
	Sarah E. Golden	620	
	Mary F. Emerson	620	
	N. Maria Stevens.....	620	
	Estelle J. French.....	620	
	Myra S. Ellis.....	620	
	Frances Fabyan.....	620	
Putnam Grammar,	Thomas W. Davis.....	1,900	478
	Eliza M. Hussey	700	
	Anna B. Josselyn	620	
	Augusta G. Mirick	620	
	Annie Knapp	620	
	Eliza S. Getchell	620	

TABULAR VIEW OF THE PUBLIC SCHOOLS. — *Continued.*

Name of School.	Teachers.	Salary.	No. of Scholars, Jan. 1, 1882.
Putnam Gram'r (*con.*)	Maria E. Spare	$620	
	C. E. Doran	620	
	Eliza A. Paddock	570	
	Annie L. Savage.....	570	
	Emma H. Vogl	520	
	Martha R. Smith.....	620	
Shepard Grammar,	Edward O. Grover.....	1,900	422
	Ellen M. Jennings.....	700	
	Julia H. Osgood.....	620	
	Sarah A. Rand	620	
	Evelyn J. Locke	620	
	Emily F. Fessenden	620	
	Ruth E. Lander.....	620	
	Dana A. Evelyth.....	620	
	Nellie A. Hutchins	620	
	Ella B. Kilburn.	520	
	Hattie W. Arnold.....	520	
Thorndike Grammar,	Ruel H. Fletcher.....	1,900	529
	Lelia A. Mirick.....	520	
	Martha A. Martin.....	620	
	Mary E. Nason	620	
	Isabella B. Tenney	620	
	Ella W. Clark	620	
	Grace W. Fletcher	620	
	Emma A. Hopkins	620	
	Abbie A. K. Howard	620	
	Lydia A. Whitcher.....	620	
	Abby S. Taylor.....	620	
	Elizabeth P. Regal	620	
	Mary A. A. McCarthy...	620	
Washington Grammar,	Daniel Mansfield.....	1,900	552
	Caroline J. Dresser.....	700	
	Lucy A. Downing.....	620	
	Adeline M. Ireson.....	620	
	Abby M. Webb	620	
	Adelaide A. Keeler.....	620	
	Adelaide A. Keith.....	620	
	Adelia Dunham.....	620	
	Emma P. Eaton.....	620	
	Caroline H. Hazeltine....	620	
	Carrie A. Cooke	620	
	Mary A. Wheeler	620	
	Susan E. Wyeth	620	
	Mary H. Hanks.....	570	
	Ellen M. Jennings.....	570	
Webster Grammar,	John D. Billings	1,900	692
	Lizzie C. Capen.....	700	
	Gertrude E. Hale.....	620	
	Esther F. Hannum.....	620	
	Mary E. Towle	620	
	Charlotte M. Chase.....	620	
	Anna S. Lamson.....	620	
	Hattie E. Wallis	570	
	Clara E. Matchett.....	620	
	Carrie M. Kingman	620	

TABULAR VIEW OF THE PUBLIC SCHOOLS. — *Continued.*

Name of School.	Teachers.	Salary.	No. of Scholars, Jan. 1, 1882.
Webster Gram'r (*con.*)	Alice Gray	$620	
	Marion H. Burnham	620	
	Ella E. Buttrick	620	
	Lillie A. Woods	620	
	Alice C. Phinney	520	
	Harriet D. Burgess	520	
Boardman Primary,	Mary Agnes Lewis	600	298
	Sarah E. Stewart	580	
	Augusta L. Balch	580	
	S. N. Chamberlain	580	
	Evelyn A. Sawyer	580	
	Elizabeth A. Karcher	400	
Bridge Primary,	Elizabeth E. Dallinger	600	76
	Emily C. Dallinger	580	
Cushing Primary,	Isadore I. Foster	600	76
	Winona Abercrombie	400	
Dana Primary,	Maria F. Williams	600	121
	Abby A. Lewis	580	
	Mary H. Ross	400	
Dunster Primary,	Sarah B. Waitt	580	84
Felton Primary,	Georgiana L. Backus	600	146
	Sarah J. Gunnison	400	
	Fanny C. Hartwell	400	
Gannett Primary,	Sarah J. Davis	600	177
	Anna M. Jones	580	
	Ellen N. Leighton	580	
	Mary A. Rady	500	
Gore Primary,	Frances E. Pendexter	600	371
	Addie M. Bettinson	580	
	Mary A. Bourne	580	
	Nellie L. Pike	580	
	Sarah D. Graham	580	
	Mary E. Mulloney	580	
	Maria J. Bacon	580	
	Lizzie J. Hawkins	400	
Harvard Primary,	Helen M. Ward	600	83
	Ellen A. Cheney	580	
Holmes Primary,	Marianne M. Webb	600	200
	Mary L. Bullard	580	
	Louisa G. Matchett	580	
	Ellen M. Cyr	500	
Lassell Primary,	Nellie F. Ball	600	203
	Ella R. Avery	400	
	Frances E. Whoriskey	400	
	Cora A. Reycroft	400	
Mason Primary,	M. Lizzie Evans	600	101
	Josephine H. Davis	500	
Otis Primary,	Luvia Goodnow	600	401
	Martha H. Butler	580	
	Kate F. Wellington	580	
	Carrie H. Smith	580	
	Mary E. Smallidge	580	
	Fannie Allen	580	
	Ellen C. Walsh	580	
	Josephine M. Doherty	580	

TABULAR VIEW OF THE PUBLIC SCHOOLS. — *Continued.*

Name of School.	Teachers.	Salary.	No. of Scholars, Jan. 1, 1882.
Quincy Primary,	Charlotte E. Jewell.....	$600	98
	Lucy C. Wyeth.....	580	
Reed Primary,	Hattie N. Keyes.....	600	129
	Margaret Kidd.....	500	
	Mary E. Connell	400	
Riverside Primary,	Elizabeth A. Tower.....	600	234
	M. Louise Akerman	580	
	Florence M. Hayward....	580	
	Amanda M. Alger.....	580	
Sargent Primary,	Frances J. Harrod.....	600	183
	Mary A. Brown	580	
	Eliza J. Mitchell	400	
	Mary E. Woodman	500	
Willard Primary,	Amelia Wright.....	600	459
	Mary E. Sawyer.....	580	
	Kate M. Lowell	580	
	Evelina Brooks.....	580	
	Laura Wright.....	580	
	Grace R. Woodward	580	
	Louise W. Harris.....	580	
	Hattie A. Hamlen	580	
	Emma C. Otis.....	500	
	Mary C. G. Harrington ..	400	
Wyman Primary,	Fannie E. M. Dennis	600	189
	Letitia M. Dennis	580	
	Charlotte A. Ewell	580	
	Martha C. Dickman	580	
Training School,	Anna C. Sullivan.....	900	237 *
	Ella C. Whitney	620	
	Emma B. Alley	580	
	Jenny Prescott	580	
	Emma A. Child	400	
	Maria L. Baldwin.....	400	
City School,	Julia S. Gushee	520	35

TEACHER OF SINGING. — Nathan Lincoln $1,700

SUPERINTENDENT OF SCHOOLS. — Francis Cogswell 2,700

SUMMARY.

Number of pupils in Training School		12
" " High School		446
" " Grammar Schools		3,859
" " Primary Schools		3,852
		8,169

* Including the Training Class (12), a Grammar Class (44), and Primary Classes (181).

COST OF INSTRUCTION.

Training School	$900 00	for each pupil	$75 00
High School	15,500 00	" " "	34 75
Grammar Schools	67,680 00	" " "	17 53
Primary Schools	44,280 00	" " "	11 49
Music	1,700 00		
Salary of Superintendent	2,700 00		
	$132,760 00	For each pupil	$16 25

Number of pupils belonging to Public Schools, Jan. 1, 1882	8,169
" " " " " Jan. 1, 1881	7,766
Increase	403

Average annual increase of pupils from 1860 to 1874 inclusive	246
Decrease of pupils, 1875	268
Increase of pupils, 1876	6
Decrease of pupils, 1877	81
" " 1878	50
Increase of pupils, 1879	57
" " 1880	286
" " 1881	403

Number of distinct schools	30
" " separate rooms	180
" " teachers	192

REPORT

OF

THE SUPERINTENDENT OF SCHOOLS.

To the School Committee of Cambridge: —

I RESPECTFULLY submit the following as my report for the year ending Dec. 31, 1881, it being my seventh report, and the thirteenth annual report of the Superintendent of Public Schools.

SUMMARY OF STATISTICS.

I. — POPULATION.

Population of Cambridge by the State census for 1880	52,740
The number of children in the city between five and fifteen years of age, May 1, 1881, as reported by the officers appointed to ascertain the fact	9,582

II. — SCHOOLS.

1 High School, with eleven divisions or classes.
8 Grammar Schools, with eighty-seven divisions or classes.
21 Primary Schools, with eighty divisions or classes.
1 Training School, with one division or class.
2 Evening Drawing Schools, with two divisions or classes.

Whole number of Day and Evening Schools	33
Whole number of divisions or classes under the charge of one teacher	181

III. — SCHOOL-HOUSES.

For the High School	1
For the Grammar Schools	8
For the Primary Schools, including Training School	20

IV. — Teachers.

Number of teachers in High School	12
Male teachers, 5; female teachers, 7.	
Number of teachers in Grammar Schools	97
Male teachers, 7; female teachers, 90.	
Number of teachers in Primary Schools, including Principal of Training School	82
Number of teachers in Evening Drawing Schools	4
Whole number of teachers in Day Schools, including teacher of music	192
Number of resignations during the year	16
Number of permanent appointments	26
Number of temporary appointments	6

V. — Pupils.

[These statistics are for the school year ending July, 1881. This is the fourth year since the statistical year and the school year were made to correspond]

Number of different pupils registered in the Day Schools during the year	8,912
Average number of pupils belonging to the Day Schools during the year	7,434
Average daily attendance of pupils in the Day Schools	6,759
Per cent of attendance in the Day Schools	91
Average number of pupils belonging to the High School	430
Average daily attendance in High School	403
Per cent of attendance in High School	93.7
Average number of pupils belonging to Grammar Schools	3,572
Average daily attendance of pupils in Grammar Schools	3,309
Per cent of attendance in Grammar Schools	92.6
Average number of pupils belonging to Primary Schools	3,418
Average daily attendance in Primary Schools	3,033
Per cent of attendance in Primary Schools	88.7
Number of different pupils belonging to Evening Drawing Schools	159
Average attendance in Evening Drawing Schools	67
Number of pupils over fifteen years of age belonging to the Day Schools, May, 1881	507
Number of pupils graduated from Primary Schools, July, 1881	773
Number of pupils graduated from Grammar Schools, July, 1881	238
Number of pupils graduated from High School, July, 1881	87
Number of pupils from High School admitted to college, July, 1881: boys, 15; girls, 6	21
Number of pupils graduated from Training School, July, 1881	11
Number of pupils admitted to Grammar Schools, September, 1881	771

Number of pupils admitted to High School, September, 1881 . . 150
Number of pupils admitted to Training School, September, 1881, 13
Whole number of Private Schools 20
Number of pupils in Private Schools 1,743

Table Showing the Number in Each Course in the High School, December, 1881.

Year.	Classical Course.	Complete English.	Shorter English.	Number of Divisions.
Fifth	21	..	..	1
Fourth	20	34	..	3
Third	41	50	12	4
Second	99		8	5
First	139		22	6

For the first two years the Classical and English Courses are identical.

Table Showing the Number in Each Class in the High School, December, 1881.

Year.	Boys.	Girls.	Total.	Per cent.
Fifth	8	13	21	.047
Fourth	23	31	54	.121
Third	39	64	103	.230
Second	51	56	107	.239
First	70	91	161	.367
Total.....	191	255	446	

Table Showing the Number in Each Class in the Grammar Schools, December, 1881.

[The numbers in this and the following table include only those scholars who were present at some session during the first two weeks of December; while those in the "Tabular View" include all who belonged to the schools, though absent on account of sickness or for other cause.]

Class.	Boys.	Girls.	Total.	Per cent.
First	119	131	250	.065
Second	188	242	430	.112
Third	310	359	669	.173
Fourth	360	396	756	.196
Fifth	391	366	757	.197
Sixth	494	490	984	.256
Total	1,862	1,984	3,846	

Table Showing the Number in Each Class in the Primary Schools, December, 1881.

Class.	Boys.	Girls.	Total.	Per cent.
First	490	531	1,021	.277
Second	553	513	1,066	.289
Third	806	790	1,596	.433
Total	1,849	1,834	3,683	

The statutes require that "the School Committee shall annually, in the month of May, ascertain, or cause to be ascertained, the names and ages of all persons belonging to their respective towns and cities on the first day of May, between the ages of five and fifteen years, and make a record thereof."

The following is a summary of the returns for 1881, made by the officers appointed to ascertain the required facts: —

Number of children in the city between five and fifteen years of age, as reported by the officers	9,582
Number in Public Schools between five and fifteen years of age, as reported by the officers	6,939
Number in Private Schools between five and fifteen years of age, as reported by the officers	1,478
Number not attending school between five and eight years of age, as reported by the officers	653
Number not attending school between eight and fourteen years of age, as reported by the officers	306
Number not attending school fourteen years of age, as reported by the officers	206
Whole number not attending school between five and fifteen years of age, as reported by the officers	1,165
Number in the city between eight and fourteen years of age, as reported by the officers	5,680

VI. — Finances.

Cost of instruction in Day Schools	$132,501 10
Text-books and stationery for Day Schools	3,107 45
Incidental expenses for Day Schools	1,318 83
Cost of Evening Drawing Schools	700 50
Care and repairs of school-houses	21,355 46
Amount expended for school-house in Ward Three	7,569 48
Amount expended for new furniture	586 79
Amount expended for fire-escapes	563 84
Total expenditures for all school purposes	$167,703 45

Deducting receipts from the Hopkins Fund ($770.07) and for tuition of non-resident pupils ($166), actual cost of the schools to the city	$166,767 38
Assessed value of real and personal estate, May, 1881	51,676,490 00
Ratio of expenses for school purposes to the valuation of 1881	.0032

Cost of Instruction in Day Schools, 1875 to 1881.

[The cost is made up of the salaries of the teachers, superintendent, and truant officers.]

Year.	Whole Cost.	Average No. of Pupils.	Cost per Pupil.
1875	$165,024 25	7,167	$23 02
1876	164,818 00	7,066	23 32
1877	151,946 65	7,139	21 28
1878	136,491 20	7,028	19 42
1879	132,570 49	6,957	19 05
1880	130,371 75	7,175	18 17
1881	132,501 10	7,434	17 82

Cost of Day Schools, 1875 to 1881.

[The expenditures for new school-houses and alterations are not included.]

Year.	Whole Cost.	Average No. of Pupils.	Cost per Pupil.
1875	$212,960 72	7,167	$29 71
1876	200,894 09	7,066	28 43
1877	180,974 36	7,139	25 35
1878	162,437 77	7,028	23 11
1879	158,196 21	6,957	22 73
1880	153,967 56	7,175	21 45
1881	158,282 84	7,434	21 29

Remarks on the Statistics.

The number of distinct schools is given as heretofore; but for the first time, the number of divisions or classes under the charge of one teacher is specified. This is done at the request of the Board of Education, that a uniform method of report may be secured throughout the State.

By comparing the statistics for 1881 with those for 1880, the following facts are obtained: There has been an increase of 259 in the average number of pupils belonging to the day schools. This does not show the entire increase for 1881, for the statistical year ends with the school year in July. At the present time (December) the schools contain 403 more pupils than they did one year ago. This increase in the number of pupils has been followed by an increase of ten in the number of teachers. The per cent of attendance has been about one per cent less than last year, and smaller than for the preceding four years. This was caused by the prevalence of contagious diseases, more especially of measles, during the early part of the year.

In the cost of instruction there has been an increase of about two thousand dollars; at the same time the cost for each pupil has been reduced. The same would be true were the total expenditures compared: an increase in the whole amount, a decrease in the amount for each pupil.

The expenditures in the school department have for several years been kept within the appropriation made by the City Council. Perhaps at no previous time have the relations between the Council and the School Committee been so harmonious as during the past few years. The sub-committee whose duty it is at the beginning of each year to prepare an estimate of the amount required for the support of the schools, and to report the same for the approval of the full board, has carefully considered every item of expense in making up that estimate, and the City Council has shown its confidence in the School Committee by appropriating in nearly every instance the exact sum asked for. There is no reason, therefore, under these circumstances, why the expenditures should not be kept within the appropriation.

In this connection I may speak of my own relations to the Committee on Public Property. This committee has in charge the care and repairs of the school-houses, also the building of new ones; therefore it frequently becomes necessary for me to see them, as a committee or individually, with reference to the needs of the schools: and I think it due to them publicly to acknowledge the courtesy and consideration which they have shown me at all times. There are reasons (and it seems to me

valid ones) why the School Committee should have the care of the school-houses, at least the appointment and control of the janitors; but so long as the present system of divided responsibility exists, it will be fortunate for the schools if the Committee on Public Property shall continue to be composed of men like those who have acted in that capacity during the last few years. I have found them ready and willing to do all in their power, consistently with the extent of their appropriation, towards promoting the comfort and convenience of teachers and pupils.

School Accommodations.

The new school-house in Ward Three was completed in May, and two rooms were occupied about the first of June. During the long vacation, the other two rooms were supplied with furniture, and in September the whole building was brought into use. This house was built none too soon; for even now there is not a vacant school-room in the ward, and the average number of pupils to a teacher in that section is quite as large as in the other parts of the city.

Were it not for the fact that a new school-house in Ward Four is to be paid for the coming year, I should recommend that the third story of the Gore school-house be finished, and that the lower classes of the Putnam grammar school be removed to that building and placed under the charge of a male teacher, to be appointed sub-master of the Putnam school; but under the circumstances, I think temporary arrangements should be made if additional room becomes a necessity.

The new school-house in Ward Four will meet only the present demand. I have no doubt that the four rooms will be occupied at the beginning of the autumn term. The plan of the house, however, is such that two or four rooms can be added, and only slight changes be required in the original building; for the halls and stairways as now arranged will be convenient and ample, should the building be enlarged.

The prospective wants of the city should be kept in view in locating and building school-houses. There are now two lots of land owned by the city which should be reserved for school purposes: one is on Jefferson Street, and the other at the

corner of DeWolf and Grant Streets. The next new school-house, unless it be a small one for the little children in the vicinity of Lake View Avenue, should be for a grammar school, and be located not far from the present school-house on Putnam Avenue.

Already there are nearly three hundred grammar-school scholars living in the territory bounded by Charles River Street, Mount Auburn, Main, Pleasant, Western Avenue, and the river, of which the location named is nearly the centre. These scholars now belong to the Webster and Washington grammar schools, and these schools at the present time occupy five rooms besides those in their own buildings. The new school would at once relieve these, so that the classes now in other buildings could be brought back to their own, leaving the rooms they now occupy for primary schools.

Reading Books.

Thousands of dollars have been spent during the past five years by the cities and towns of Massachusetts for the purchase of supplementary reading books; at the same time, in most of these places, parents have been obliged, as formerly, to buy the regular reading books.

Many persons think that text-books, as well as school-houses, furniture, and instruction, should be free. Our Legislature in 1873 placed among the statutes the following: "Any city, by an ordinance of the city council, and any town, by legal vote, may authorize the school committee to purchase text-books for use in the public schools; said text-books to be the property of the city or town, and to be loaned to pupils, under such regulations as the school committee may provide."

The city of Fall River availed itself of the provisions of this statute; and the superintendent of schools, Mr. Connell, states that the system of "free text-books" works satisfactorily in that city; that no objections are raised to it from any source; that the cost is one dollar per annum for each pupil on average daily attendance, or sixty cents for each pupil enrolled; and that all the pupils in the schools, from the primary to the high school, inclusive, are supplied with everything needed for school work.

I do not now propose to discuss the subject of free text-books, except in relation to reading books.

At the present time, no one familiar with the best methods of teaching reading, and no one who has thoughtfully considered how the young shall be so trained as to lead them to choose books of real merit for their own reading, doubts the desirability of having schools supplied with a variety of interesting reading matter. How to secure this in the best form, and in the most economical way, is a question which should at once receive the attention of the Committee. Having given the subject considerable thought myself, I am satisfied that it would be true economy, and conducive to the interests of the schools, for the city to buy the regular reading books, and loan them to pupils. That the whole cost of the books may not come in any one year's appropriation, it would be well to supply only one or two classes at a time. I would begin with the lowest class in the grammar schools, the primary schools having already been partially supplied.

It would be true economy for the city to own the regular books: *first*, because supplementary books would no longer be required; *second*, because the city at present pays for so large a per cent of the books now used; *third*, because the cost of reading books to the city for a term of years would be much less than to parents.

1. Supplementary books would not be required, for the city in buying the regular books could just as well buy a different set for each division of each class, and these could be read in turn by each division, thus securing a sufficient amount and variety of reading.

2. The city has just paid for twenty-seven and seven tenths per cent of the reading books now used by the sixth class in the grammar schools, and only about five per cent of the cost of these will be received back in the form of taxes. The city, therefore, will finally pay for more than one fourth of the reading books for that class, and yet not own them.

If the city would retain its ownership in the books it buys, it would evidently take, at the above rate, only four years to own all the books. Reading books will last more than four years, therefore it would be a saving to the city to supply the pupils as proposed.

3. The cost of books to the city would be less than to parents: *first*, because the city buys at wholesale, while parents buy at retail; *second*, because the number of books the city would be called upon to buy in a term of years would be smaller than the number bought by parents, — for every book owned by the city would be used till worn out, while many of the books owned by parents would be laid aside in good condition.

The plan which I have described, if adopted and carried out, will require for the first year an appropriation of $475, and for four successive years an annual appropriation of not far from $500. It should be remembered, however, that the annual appropriation for text-books would not be increased by the full amount of these sums; for, as already stated, quite a large per cent of the books are now bought by the city.

In what I have said, I have taken it for granted that our schools are to be supplied with a variety of reading matter; if so, in my opinion, it would be for the interest of the city, as well as that of the schools, to buy the regular reading books and loan them to all the pupils.

Classification and Promotion.

By the rules of the School Committee, each primary school is divided into three classes; each grammar school into six. Should the classes thus formed be too large to recite conveniently together, each class is divided into two or more sections; the division being so made that each section of the same class holds the same relative rank and pursues the same studies. Would it not be better to divide the classes into sections according to the ability of the pupils to do more or less work? These might be called the *first* and *second* divisions of the class: the first division to pursue the regular studies in the most thorough manner, and besides this, take either a more extended course in reading, or another study; the second to give attention only to the more important parts of the branches now required, omitting from one third to one half of the geography, and many subjects in arithmetic. Two thirds of all the pupils entering the grammar schools leave before they reach the first class. A consid-

erable per cent of these are scholars who fail from year to year to do the work required. With the proposed classification, it would seldom if ever be necessary, as is now frequently the case, for a pupil to continue in a class two years in succession, doing the second year precisely the same work he did the first. Every scholar, as a rule, could be carried forward at least one division every year, and thereby find something new to interest him. If a child can remain in one of our grammar schools only three or four years, is it not more profitable for him to give his attention to the practical parts of the course of study for the whole time he is in school, than to learn even thoroughly all that is now required for the first two or three years?

For this large number of children who drop out of our schools one by one, we ought to do all that can be done to fit them for the duties of life. No course of study, and no system of classification or of promotion, should be so rigid in its application as to work injury to these pupils. They should be taught what will be most useful to them; they should be so taught as not to become discouraged and disheartened in their work. In deciding the question of the promotion of scholars, too much importance should not be given to a single final examination. For several years, I have not favored a uniform examination of the classes throughout the city, believing that the broadest teaching would not be secured when comparison of results, as shown in percentages of correct answers, was possible. I think the principals of our schools, whose duty it is "to assign each pupil to his class," should spend more time with their lower classes, and make themselves personally acquainted with the capacities and attainments of all their pupils. The beneficial results of doing this would not end with the knowledge acquired. The pupils would be stimulated to greater exertion by feeling that the principal of the school, as well as their regular teacher, was watching their course with deep interest in their progress. Failures are oftener the result of indifference than of inability. Let pupils become interested in their studies, and results will take care of themselves. Teachers should never lose sight of the welfare of the whole school; at the same time, they should not forget that each pupil has special claims upon their thought and attention.

Grammar-School Diplomas.

Ten years ago my predecessor in office, Mr. Hale, referring to the fact that many scholars fail to complete the course of study, wrote as follows: "Only a very small percentage of the pupils who enter the grammar schools complete the course, or even reach the second class; and yet our experience in this direction is not unlike that of other cities and towns. So far as regards our ability to prevent this very undesirable result, we are for the most part helpless. Parents will take their children from the schools whenever they please, and they make the absence long or short, temporary or permanent, as seems to them best. Nevertheless, it is important to bring every possible influence to bear to prevent the withdrawal of children from the schools; and as a means of accomplishing something in this direction, I suggest the propriety of hereafter granting diplomas to pupils who finish the prescribed course of study in the grammar schools."

In accordance with this suggestion, the Committee adopted the following order: "That diplomas of graduation be awarded to those pupils of the graduating class of each grammar school who have properly completed the prescribed course of study, and whose deportment during the year has been generally satisfactory."

It will be noticed that the original object for which diplomas were granted was to prevent the withdrawal of children from the schools. At first these diplomas were not received as evidence of qualification for admission to the High School. It was undoubtedly the intention of the Committee to give them to all the members of the graduating class who had been faithful and diligent in the discharge of their duties.

It is the testimony of all the masters that their pupils are anxious to obtain the diplomas, and that many remain in school solely for this purpose.

By the rules of the Committee, these diplomas have now become a passport to the High School; it has, therefore, been necessary in some cases to withhold them from pupils who have done their work to the best of their ability, and yet can-

not profitably enter upon a more advanced course of study. Even if these pupils have no intention of entering the High School, the diploma must be withheld; for if granted, they would have the right to demand admission. It seems to me that the city ought to recognize the faithfulness of this class of scholars, and grant them diplomas of graduation which should not admit them to the High School. The change of a single word in the diploma now given would make all necessary distinction. It now reads, "The city of Cambridge awards this diploma to certify that (blank) has honorably completed the prescribed course of study." For *honorably* substitute *regularly*, and the certificate would still be both desirable and truthful. Perhaps a better way would be to make no change in the diploma, but with the diploma to give each pupil prepared to enter the High School a certificate to that effect.

In this connection, I will speak of the examination of the last graduating class. For the first time, the examination in history and in language was in the form of a written composition. The topics assigned were as follows: —

In history: (*a*) The Settlement of New York. (*b*) The Events of 1776. (*c*) General Arnold. (*d*) Monroe's Administration. (*e*) Our Navy in the Civil War. (*f*) Sherman's March to the Sea.

In language: (*a*) The Story of Evangeline. (*b*) The Story of Rip Van Winkle. (*c*) The Story of the Great Stone Face. (*d*) Alfred the Great.

Scholars were allowed to select *one* or *more* of the topics in history, but were confined to *one* in language. As the stories of Evangeline, Rip Van Winkle, and the Great Stone Face are in the supplementary reading books used in schools, it was presumed that the scholars were familiar with them. The piece entitled Alfred the Great was read to them by the teachers.

In place of any one of the topics in language, any pupil was allowed to rewrite from memory, with such changes as he chose to make, any original composition he had prepared during the year. The questions in geography and arithmetic were of the usual character. The results of this examination are highly creditable to our schools.

Our teachers are doing good work, and this I wish could be better known, for then its value would be more generally appreciated. It will give me pleasure to show these examination papers to any person who may desire to inspect them.

Examinations.

The public examinations as now arranged answer well the purpose for which they are intended. I believe, however, that while the method of conducting the private examinations has been greatly improved within the past five years, it can be made still more effective. The rule of the Committee as it now stands is as follows: "The schools shall be examined publicly once in each year, the High School and the Grammar Schools in the month of December, and the Primary Schools in the month of May, by the whole Board or by sub-committees. The examination shall be confined to the studies pursued during a specified period. At the regular meeting of the Committee in April, each member of the Committee shall have certain schools assigned him for private examination, which examination shall be made without any previous announcement; and the reports of such examinations shall be sent to the Secretary by the 10th of June, to be placed on file, and open only to the inspection of the Board and Superintendent."

I would not change this rule, but add to it the following: Whenever the Committee on Examinations and Promotions deems it desirable to have a special report upon the condition of any school, it shall notify the Committee on the Examination of Teachers, and it shall be the duty of that committee to visit the school and report to the full Board in executive session.

For the past two years, great care has been exercised in the appointment of new teachers. This is as it should be, for the first requisite to a good school is an efficient teacher. Equal care should be taken in the re-appointment of teachers in regard to whose success there is any question.

Change of Teachers.

During the year, sixteen teachers have left our schools and twenty-six new appointments have been made. Some of these changes seem to call for more than a passing notice.

The Allston School has lost one of the best and most devoted teachers in the city by the death of Miss Lizzie B. Winnett. For more than twenty years she had been a teacher in that school, occupying for a considerable part of that time the responsible position of head assistant. During this long period, she devoted all her energies to promoting the best interests of the school. She loved her work, and was enthusiastic in it. Her influence was not confined to her class, but was felt throughout the school, and far beyond the prescribed limits of her duties. She has left an impress for good on hundreds of pupils, that time cannot efface. Prof. Tweed, the sub-committee of the school, in announcing her death, said that "she was a teacher of extraordinary ability and earnestness, deeply beloved by her associates and pupils." Dr. Peabody remarked that "her spirit and character were deserving of the highest commendation, and that it was a great loss to the community when such a teacher was taken from us." By a vote of the Board, the Ward Committee was requested to communicate to the family of Miss Winnett the sentiments entertained by the School Committee concerning her character and service.

In April, Mr. Magoun, of the Harvard Grammar School, retired after a faithful service of more than forty years. No words of mine can more fully express the high esteem in which he was held than the following resolutions, adopted by the Committee in accepting his resignation : —

Resolved, That the retirement of Mr. A. B. Magoun from the position of master of the Harvard Grammar School, which he has held with marked ability for more than forty years, is an event calling for special notice by the School Committee.

Resolved, That only by a rare combination of good judgment and conscientious devotion to duty could Mr. Magoun have secured, and for so long a period retained, the respect, confidence, and good-will of parents and pupils, and have met the approval of the several Committees under whom he has served.

Resolved, That the School Board, in their own behalf, and that of their predecessors and the community at large, tender to Mr. Magoun their best wishes for his future welfare; that he may live long to enjoy the fruits of an active life, so worthily and usefully spent.

A copy of these resolutions, handsomely engrossed and framed, was sent to Mr. Magoun. It has seemed to me emi-

nently proper that they should also have a more public place, on the pages of this official report.

At the meeting of the Committee in March, besides the announcement of the death of Miss Winnett and of the retirement of Mr. Magoun, the resignation of Mr. Lyman R. Williston, the master of the High School, was received. Mr. Williston was first appointed to that position in 1857, resigned at the end of five years, and was re-appointed in 1870. His whole term of service, therefore, was nearly sixteen years. With rare attainments as a scholar, he exerted upon his pupils a most salutary influence, and the school under his management was highly prosperous.

Miss Ellen M. Parker retired from the Thorndike School at the close of the year, having held the position of head assistant for seven years. The city loses an earnest, conscientious teacher.

Other important changes have taken place. Mr. Bradbury has been promoted to the mastership of the High School, Mr. Adams to a more responsible position in the same school, and Mr. Sargent, of the High School in Lynn, has taken the place of Mr. Adams. Mr. Davis, of the Belmont High School, has been appointed master of the Putnam Grammar School, in place of Mr. Barrell transferred to the Harvard.

Mr. Mansfield, of the Washington School, has been unable, by reason of ill health, to perform his school duties for nearly the whole year. In his absence the school was successfully carried on till the April vacation by the head assistant, Miss Dresser; as it has been since that time by Mr. Freese, a teacher of large experience.

Miscellaneous.

During the past year, there has been an aggregate of two hundred and fifty weeks of absence on the part of teachers, and of course an equal number of weeks when substitutes were employed. This time exceeds that of six teachers for the whole year; it is therefore an important consideration how to secure efficient substitutes in our schools. In this temporary work the graduates of our Training School are more successful in the primary schools than in the grammar schools; nor is this

strange, for these young ladies have had no opportunity of observing the management of our large grammar schools since the time when they were pupils in them, and then they looked at everything from a pupil's point of view.

I believe that the members of the training class should spend in our grammar schools either one half of each week from the first of January to the close of the school year, or an equal amount of time after they graduate, before they are considered eligible for permanent positions.

It gives me pleasure again to refer to the work of our truant officers. I like the kindly spirit in which their duties are performed. The value of their services is not shown by the number of children sentenced as habitual truants, but rather by the number whom they prevent from becoming truants. They are helpful to parents as well as to teachers, and have gained the respect and confidence of both.

During the fall term, Messrs. Prang & Co., publishers of the drawing-books used in our schools, having issued a new series, offered to send an agent to explain the plan of the books to our teachers. I accepted their offer, and arranged for three meetings, which proved to be both interesting and profitable. The objects to be kept in view in teaching drawing, and the practical advantages of the study, were clearly indicated by the agent, Mr. Chase; and I believe our teachers will now carry on this work with renewed interest, and with a better understanding of what should be required of their pupils. Messrs. Prang & Co. may congratulate themselves upon having secured the services of a gentleman so admirably fitted for the position he occupies. At the close of the lectures, our teachers gave unanimous expression to their sense, not only of the value of the suggestions he had given, but of the clearness and spirit with which they had been presented.

Much has been said and written within the past few years upon the subject of moral instruction in the public schools. I am glad to report that many of our teachers take frequent occasion to impress on the minds of their pupils "those virtues which are the ornament of human society, and the basis upon which a republican constitution is founded." In one of our large grammar schools, nearly every boy has pledged himself to

refrain from the use of tobacco in any form for the coming year, — an example worthy of imitation. In another, the experiment of self-government has been successfully tried since September by the pupils of the first class. Every case of discipline has been referred to a committee of the class; and so far, no offending pupil has failed to acquiesce in the decisions of this committee.

The hope of the future, with reference to the great evils that now exist in the community and in the country, is in the training of the young to right principles of action. It has been truly said, "A man can make a fortune in a day; but a great moral purpose is a thing of time. It must begin in the boy or the girl."

FRANCIS COGSWELL,
Superintendent of Public Schools.

ORDINANCES PASSED IN 1881.

An Ordinance in Relation to the Compensation of the Assistant City Clerk.

Chapter 27 of the Revised Ordinances is hereby amended, as follows, viz.: —

"The salary of the assistant city clerk shall be twelve hundred dollars per annum, to date from Jan. 1, 1881."

[*Adopted March* 23, 1881.]

An Ordinance in Amendment of the Ordinance in Relation to the Water Works.

Section 25 of Chapter 39 of the Revised Ordinances is hereby amended by striking out the word "thirty," in the second line of the second paragraph, and inserting in place thereof the word "fifteen."

[*Adopted May* 18, 1881.]

An Ordinance in Amendment of an Ordinance in Relation to Streets.

Chapter 36 of the Revised Ordinances is hereby amended by adding at the end of Section 26 the following: —

"Whoever shall be found in possession of a club or bludgeon, on any street, park or way, with intent to use the same in sports, sham fights, or strife, or to intimidate persons or horses, shall be fined not less than one dollar nor more than twenty dollars.

"Whoever shall be found in possession of toy pistols, crotches, rubber slings, or other devices for throwing missiles of any kind, with intent to use the same to the injury of persons or property, or to the annoyance or discomfort of any person, upon any street, park or way, shall be fined not less than one dollar nor more than twenty dollars."

[*Adopted Dec.* 7, 1881.]

An Ordinance in Amendment of an Ordinance in Relation to Streets.

Chapter 36 of the Revised City Ordinances is hereby amended, as follows, in Section 14, by inserting in the fifth line, after the word "aldermen," the words, "or some person by them authorized for that purpose."

Also, in Section 15, by inserting in the first line, after the word "aldermen," the words, "or some person by them authorized for that purpose."

[*Adopted Dec.* 28, 1881.]

An Ordinance in Amendment of an Ordinance in Relation to Sewers.

Sections 9 and 10 of Chapter 32 of the Revised City Ordinances are hereby repealed, the same being in relation to house drainage.

Section 12 of Chapter 32 of the Revised City Ordinances is hereby amended by striking out of the first line thereof the words, "and catch-basins."

[*Adopted Dec.* 28, 1881.]

An Ordinance in Amendment of an Ordinance in Relation to the Fire Department.

Chapter 16 of the Revised Ordinances is hereby amended by striking out the second section thereof, and inserting in its place the following: —

"SECTION 2. In the month of April, in the year eighteen hundred and eighty-two, there shall be appointed by the mayor, with the approval of the board of aldermen, and the concurrence of the common council, — or, in default thereof, afterward, by a concurrent vote of the city council, either branch acting first, — a chief engineer and three assistant engineers, who shall hold their offices until removed by the city council, and until others are elected in their places. Whenever a vacancy occurs in either of the offices named herein, the same shall be filled forthwith, in the same manner as herein before prescribed."

Also, by striking out the fifteenth section, and inserting in its place the following: —

"SECTION 15. The mayor and aldermen shall, in the month of January, in the year eighteen hundred and eighty-two, and whenever vacancies occur, appoint the several engine, hose and hook and ladder companies, whose term of service shall continue until the respective appointees are removed by the mayor and aldermen, and others appointed in their places; and the members of said companies shall receive a warrant substantially like that prescribed for the engineers."

Adopted Dec. 28, 1881.]

MAYORS

OF

THE CITY OF CAMBRIDGE

FROM 1846 TO 1882.

James D. Green . . .	from	May,	1846,	to April,	1848.
Sidney Willard . . .	"	April,	1848,	to April,	1851.
George Stevens . . .	"	April,	1851,	to April,	1853.
James D. Green . . .	"	April,	1853,	to April,	1854.
*Abraham Edwards . .	"	April,	1854,	to January,	1855.
Zebina L. Raymond . .	"	January,	1855,	to January,	1856.
John Sargent	"	January,	1856,	to January,	1860.
†James D. Green . . .	"	January,	1860,	to July 24,	1861.
‡Charles Theo. Russell .	"	July 31,	1861,	to January,	1863.
George C. Richardson .	"	January,	1863,	to January,	1864.
Zebina L. Raymond . .	"	January,	1864,	to January,	1865.
J. Warren Merrill . .	"	January,	1865,	to January,	1867.
Ezra Parmenter . . .	"	January,	1867,	to January,	1868.
Charles H. Saunders .	"	January,	1868,	to January,	1870.
Hamlin R. Harding . .	"	January,	1870,	to January,	1872.
Henry O. Houghton . .	"	January,	1872,	to January,	1873.
Isaac Bradford . . .	"	January,	1873,	to January,	1877.
Frank A. Allen . . .	"	January,	1877,	to January,	1878.
Samuel L. Montague .	"	January,	1878,	to January,	1880.
James M. W. Hall . .	"	January,	1880,	to January,	1881.
James A. Fox	"	January,	1881.	Now in office.	

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* Municipal year changed. † Resigned.

‡ First elected by the City Council.

GOVERNMENT

OF

THE CITY OF CAMBRIDGE.

1882.

MAYOR.

HON. JAMES A. FOX.

ALDERMEN.

NEWELL CHAMBERLAIN,
MICHAEL CORCORAN,
GEORGE A. DAVIS,
WILLIAM E. DOYLE,
JOHN W. FAIRBANKS,
NATHAN G. GOOCH,
LUCAS B. GROVER,
EDWARD T. NICHOLS,
JOHN READ,
SOLOMON S. SLEERER.

Aldermen, by Wards.

Ward 1. Aldermen GOOCH and READ.
" 2. " DAVIS and GROVER.
" 3. Alderman DOYLE.
" 4. Aldermen CHAMBERLAIN and NICHOLS.
" 5. " CORCORAN, FAIRBANKS, and SLEEPER.

Clerk.

JUSTIN A. JACOBS.

COMMON COUNCIL.

GEORGE H. HOWARD, *President.*

GEORGE A. ALLISON,
STEPHEN ANDERSON,
WILLIAM A. BANCROFT,
CORNELIUS G. H. BENNINK,
GEORGE C. BENT,
JOHN CLARY,
JOSIAH H. COBB,
JAMES E. DOYLE,
CHARLES W. HENDERSON,
FREDERICK H. HOLTON,
GEORGE H. HOWARD,
ARTHUR E. JONES,
NATHAN C. LOMBARD,
SAMUEL W. MCDANIEL,
PETER NELIGAN,
ISAAC S. PEAR,
WILLIAM E. RUSSELL,
JOHN E. STEPHENSON,
JOHN G. THOROGOOD,
JAMES H. WELLS.

Common Council, by Wards.

Ward 1. Messrs. BANCROFT, JONES, MCDANIEL, and RUSSELL.
" 2. " BENNINK, BENT, COBB, HOLTON, LOMBARD, and STEPHENSON.
" 3. " ANDERSON, CLARY, DOYLE, and HOWARD.
" 4. " HENDERSON, PEAR, THOROGOOD, and WELLS.
" 5. " ALLISON and NELIGAN.

Clerk.

J. WARREN COTTON.

Page.

WILLIAM PEARSON.

CITY CLERK.

JUSTIN A. JACOBS.

ASSISTANT CITY CLERK.

WALTER W. PIKE.

CITY MESSENGER.

FRANCIS L. PRATT.

COMMITTEES OF THE CITY COUNCIL.

Joint Standing Committees.

On Finance.

	Common Council.
The MAYOR.	The President.
	George A. Allison.
	George C. Bent.
Aldermen.	FREDERICK H. HOLTON.
Nathan G. Gooch.	James H. Wells.
John Read.	Arthur E. Jones.

On Public Instruction.

Aldermen.	Common Council.
George A. Davis.	The President.
Lucas B. Grover.	Samuel W. McDaniel.
	George A. Allison.
	Charles W. Henderson.

On Ordinances.

Aldermen.	Common Council.
Solomon S. Sleeper.	William A. Bancroft.
John Read.	Nathan C. Lombard.
	William E. Russell.

On Accounts.

Aldermen.	Common Council.
Newell Chamberlain.	John Clary.
Lucas B. Grover.	Nathan C. Lombard.
	Isaac S. Pear.

On Public Property.

Aldermen.	Common Council.
Edward T. Nichols.	John Clary.
Michael Corcoran.	George C. Bent.
	James H. Wells.

On the Almshouse.

Aldermen.	Common Council.
William E. Doyle.	James E. Doyle.
Solomon S. Sleeper.	Stephen Anderson.
	William A. Bancroft.

On Roads and Bridges.

Aldermen.	Common Council.
William E. Doyle.	Peter Neligan.
Edward T. Nichols.	Cornelius G. H. Bennink.
	Charles W. Henderson.

On Fuel.

Aldermen.	Common Council.
Nathan G. Gooch.	James E. Doyle.
Solomon S. Sleeper.	Isaac S. Pear.
	Samuel W. McDaniel.

On Lamps.

Aldermen.	Common Council.
Newell Chamberlain.	Stephen Anderson.
Michael Corcoran.	James E. Doyle.
	Josiah H. Cobb.

On Printing.

Aldermen.	Common Council.
Michael Corcoran.	Stephen Anderson.
Newell Chamberlain.	William E. Russell.
	John G. Thorogood.

On the Fire Department.

Aldermen.	Common Council.
William E. Doyle.	Charles W. Henderson.
George A. Davis.	George C. Bent.
	Peter Neligan.

On City Engineering.

Aldermen.	Common Council.
Edward T. Nichols.	William E. Russell.
George A. Davis.	John G. Thorogood.
	Josiah H. Cobb.

On Assessors' Department.

Alderman.	Common Council.
John W. Fairbanks.	Samuel W. McDaniel.
	James H. Wells.

On Claims.

	Common Council.
The Mayor.	The President.
	Cornelius G. H. Bennink.
Aldermen.	George A. Allison.
Nathan G. Gooch.	Frederick H. Holton.
Newell Chamberlain.	John E. Stephenson.
John W. Fairbanks.	Arthur E. Jones.

Special Committee of Board of Aldermen.

On Soldiers' Aid.

Nathan G. Gooch. George A. Davis.
John Read. John W. Fairbanks.
Lucas B. Grover.

Standing Committees of Board of Mayor and Aldermen.

On Police.

The Mayor. William E. Doyle.
Michael Corcoran. John Read.

On the Fire Department.

William E. Doyle. George A. Davis.
John W. Fairbanks.

On Roads and Bridges.

William E. Doyle. Edward T. Nichols.
Michael Corcoran.

On Sewers and Drains.

Michael Corcoran. Edward T. Nichols.
Solomon S. Sleeper.

On Licenses.

Edward T. Nichols. William E. Doyle.
Solomon S. Sleeper.

On Health.

Solomon S. Sleeper. Edward T. Nichols.
Michael Corcoran.

On Bonds.

Lucas B. Grover. John W. Fairbanks.
John Read.

On Claims.

The Mayor. Newell Chamberlain.
Nathan G. Gooch. John W. Fairbanks.

Standing Committees of the Common Council.

On Elections and Returns.

Frederick H. Holton. James E. Doyle.
William A. Bancroft.

On Bills in the Second Reading.

John E. Stephenson. John Clary.
Peter Neligan.

On Enrolled Ordinances.

Peter Neligan. Josiah H. Cobb.
Nathan C. Lombard.

Clerk of Committees.

John McDuffie.

Board of Health.

Henry P. Walcott, *City Physician.*
George F. Piper. Daniel H. Thurston.

Health Officer.

Alfred F. Holt, M. D.

Assistant City Physician.

Obed C. Turner, M. D.

Health Officers.

Frederick W. Hagar. George H. Copeland.
Mark J. Folsom. Lothrop J. Cloyes.
John F. Murray.

Surveyors of Highways.

The same persons who compose the Board of Mayor and Aldermen.

Auditor of Accounts.

Franklin Perrin.

Treasurer.

William W. Dallinger.

Assessors.

Artemas Z. Brown. Andrew J. Green.
Edmund B. Whitman.

Assistant Assessors.

Thomas Stearns. James F. Murphy.
Samuel Sanders. Joseph Whittemore.
Oliver B. Campell.

School Committee.

James A. Fox, Mayor, *ex officio*, *Chairman*.

Ward I.

Horace E. Scudder. Clement L. Smith.
John L. Hildreth.

Ward II.

Phebe M. Kendall. Benjamin F. Tweed.
Henry N. Tilton.

Ward III.

John O'Brien. Edward B. Malley.
John Conlan.

Ward IV.

Sarah S. Jacobs. William H. Orcutt.
Asa P. Morse.

Ward V.

William Fox Richardson. William A. Start.
Obed C. Turner.

Secretary.

W. W. Wellington.

Superintendent of Schools.

Francis Cogswell.

Overseers of the Poor.

The MAYOR, *ex officio*, *Chairman*.

Sumner Albee. George D. Chamberlain.
Jonas C. Wellington. Ezra Parmenter.
Charles E. Vaughan.

Clerk.

David P. Muzzey.

Warden of the Almshouse.

William E. Hough.

Physician of the Almshouse.

Obed C. Turner (*Assistant City Physician*).

Cambridge Cemetery.

Commissioners.

The MAYOR, *ex officio*.

William Page. Silas B. Buck.
George S. Saunders. John F. O'Brien.
George T. Gale. Curtis Davis.

Superintendent.

James K. Farwell.

Trustees of Cambridge Public Library.

Alderman. **Common Council.**

John W. Fairbanks. Samuel W. McDaniel.

Citizens at Large.

John Conlan. John S. March.
George H. Folger. Hersey B. Goodwin.
Samuel L. Montague.

Librarian. **Secretary.**

Miss Almira L. Hayward. John Conlan.

Cambridge Water Board.

The MAYOR, and President of the Common Council, *ex officio*.

Chester W. Kingsley. Geo. P. Carter, *President*.
Henry L. Eustis. Kowlton S. Chaffee.
James M. W. Hall.

Clerk.

Justin A. Jacobs.

Superintendent of Water Works.

Hiram Nevons.

Water Registrar.

J. Warren Cotton.

Trustees of Sinking Fund of Water Loan.

The MAYOR, City Treasurer, and President of the Common Council.

Commissioners on Sinking Funds of the City.

John M. Tyler. Joseph A. Holmes.
Robert Douglass. Charles H. Saunders.
Frank A. Allen. Knowlton S. Chaffee.

Trustees of the Sanders Temperance Fund.

The MAYOR, and President of the Common Council, *ex officio*.

Alderman.

Nathan G. Gooch.

Common Council.

Frederick H. Holton.
John Clary.

Trustees of the Bridge Charitable Fund.

The MAYOR, and President of the Common Council, *ex officio*.

Alderman.

Solomon S. Sleeper.

Trustees of the Dowse Institute.

The MAYOR, and President of the Common Council, *ex officio*.
William W. Wellington. Willard A. Bullard.
Frank A. Allen.

Representatives in General Court.

Henry W. Muzzey. Sumner Albee.
Chester W. Kingsley. George D. Chamberlain.
Henry J. Wells. John McSorley.

Police Court.

Standing Justice.

John S. Ladd.

Special Justices.

William H. Orcutt. Jabez Fox.

Clerk.

Emerson W. Law.

City Solicitor.

John W. Hammond.

City Engineer.

William S. Barbour.

Commissioner on West Boston, Craigie's, and Prison Point Bridges.

Ezra Parmenter.

Superintendent of Streets.

Bainbridge W. Woodard.

Superintendent of Lamps.

Benjamin F. Nourse.

Board of Engineers.

Chief Engineer.

Thomas J. Casey.

Assistant Engineers.

First Assistant . . . . . Richard F. Tobin.
Second Assistant . . . . . Nathaniel W. Bunker.
Third Assistant . . . . . Charles W. Brackett.

Secretary of the Board.

Nathaniel W. Bunker.

Police Department.

Chief of Police.

Frederick W. Hagar.

Captains of Police.

District I.

Lothrop J. Cloyes.

District II.

George H. Copeland.

District III.

John F. Murray.

Captain of Night Police.

Mark J. Folsom.

Sergeants of Police.

Thomas D. Cook.
Andrew Sproul.
Frederick B. Pullen.
William Twist.
Michael A. Dalton.
William Mullett.

Policemen.

Andrew G. Smith.
George A. Marston.
Leonard Shackford.
David A. Stevens.
Edward F. Belcher.
Luther Hapgood.
Simon D. Hiscock.
Thomas H. Lucy.
George S. Dudley.
Benjamin F. Higgins.
Daniel Callahan.
Dennis Corcoran.
Moses W. Hooper.
Amos Jones.
Patrick Doyle.
Alonzo S. Harriman.
Thomas W. Penney.
William Evans, Jr.
Charles A. Brown.
William H. McMenimen.
Orrin B. White.
Michael J. Nolan.
Hugh McNamee.
Timothy Corcoran.
James E. Murray.
Thomas S. Hall.
William Nickelson.
Lawrence J. Ducey.
James S. Alexander.
Frank W. Scobey.
William Hawkins.
Warren A. Eaton.
Otis Dennison.
John W. Skelley.
Charles W. Priest.
Charles L. Pike.
Joseph H. Furbush.
William Gallagher.
Edward Brady.
Matthew R. Moore.
Jeremiah J. Delaney.
Michael J. Conry.
James M. Keaney.
Rufus S. Downe.
William F. Batchelder.

Policemen (without pay).

J. L. P. Ackers.
Horace A. Allyn.
Charles W. Ash.
Fred. H. Balch.
Benjamin F. Bridden.
Thomas Briney.
William H. Bates.
Alexander A. Barker.
Nathaniel W. Bunker.
Ferdinand N. Buffum.
George T. Barrington.
Frank E. Balch.
Charles W. Brackett.
Solomon M. Busnach.
Richard Balmer.
Thomas J. Casey.
Charles S. Childs.
John Coffee.
Joseph Collins.
William Collins.
Moses M. Child.
Noah M. Cofran.
Patrick Corcoran.
Ambrose H. Clark.
John Collier.
Micah W. Cook.

Thomas F. Dinan.
James F. Dunn.
William H. Dodge.
Moses Dudley.
Thomas H. Eames.
George D. Eaton, Jr.
Frank A. Edson.
Henry L. Emerson.
G. C. W. Fuller.
James K. Farwell.
Dennis J. Fielding.
John Fitzgerald.
William Foster.
John Gorman.
William H. Grieves.
Charles A. Gay.
William T. Gibson.
George W. Greenleaf.
Major Gaines.
Eli Goodrow.
Angus M. Hamilton.
Charles F. Hittinger.
Samuel F. Hunt.
Henry L. Hale.
Edward H. Howe.
Appleton Hubbard.
William Hunnewell.
William E. Hough.
Thomas M. Howard.
Frederick W. Hagar, Jr.
Martin J. Hannon.
Matthew P. Kelly.
Benjamin Kennard.
Roland Litchfield.
William O. Lowell.
Martin V. Langley.
James W. Lovering.
George B. Lothrop.
John Loughrey.
John Little.
Abiel E. Long.
Charles S. Lincoln.
Patrick McCarthy.
Dennis Murphy.
John H. Menard.
Thomas Montgomery.
Francis M. Mason.
Benjamin McIlvaine.
Patrick F. Murray.
Patrick Murphy.
Philip McGovern.
Robert McKillican.
Augustus W. Nelson.
Hiram Nevons.
William A. Norris.
George R. Oliver.
Francis A. Osborn.
Thomas F. O'Brien.
Joseph A. Pike.
Francis L. Pratt.
Eben Pratt.
William N. Porter.
Benjamin J. Pierce.
Lewis Pratt.
John Riley.
P. H. Raymond.
Charles L. Russell.
Bernard J. Roper.
John W. Richmond.
John J. Ryan.
John Ring.
Alonzo Stevens.
George Smyth.
Joshua S. Sanborn.
Alex. F. Shepherd.
John H. Steward.
Philip Sullivan.
Thomas F. Sullivan.

George J. Sutton.
George W. Tower.
Richard F. Tobin.
Maurice Walsh.
John Wiley.
Edward M. Williams.
Elijah Wilson.
James W. Wright.
Bainbridge W. Woodard.
Edgar L. Worcester.

William S. Wilson.

Keeper of Lock-ups.

Frederick W. Hagar.

Truant Officers.

Moses M. Child.
John Collier.
Francis M. Mason.

Probation Officer.

Frederick W. Hagar.

Constables.

Frederick W. Hagar.
William Twist.
John C. Burdakin.
Frederick A. Lull.
Thomas T. Ferguson.
Michael S. Busnach.
Charles J. Adams.
John L. Boynton.
Lothrop J. Cloyes.
Charles H. Hunnewell.
Appleton Hubbard.
William Evans, Jr.
Joseph Fox.
Fred. H. Seavey.
John F. Murray.
James I. Murphy.
John Lennon.
Thomas J. Stevens.
John R. Fairbairn.
Dennis D. McCarthy.
Mark J. Folsom.
John Good.
William Dallinger.
George H. Copeland.
Alfred F. Holt.
George T. Barrington.
William N. Mullins.
Edward M. Williams.

Superintendent of Burial Ground in Ward 1.

Benjamin F. Wyeth.

Undertakers.

Benjamin F. Wyeth.
Roland Litchfield.
Samuel F. Hunt.
Thomas Devens.
John W. Coveney.
Judson Litchfield.
James Kernan.
William Casey.
C. Henry Lockhart.
William A. Taylor
Horace D. Litchfield.
James E. Rourke.

Auctioneers.

Samuel F. Rugg.
Edward Burnham.
Enoch H. Wakefield.
Frederick A. Lull.
Ira Taylor.
Daniel A. Buckley.
H. A. Brown.
Edmund E. Sanborn.
Moses E. Cushman.
John R. Fairbairn.
Jeremiah W. Coveney.
John Lennon.
Thomas J. Stevens.
John K. Abbott.
True W. Townsend.
William Dickson.
Watson G. Cutter.
Patrick Phelan.

Fence-Viewers.

George B. Lothrop.
Abel Stevens.
Francis H. Stickney.

Field Drivers.

Andrew G. Smith.
George A. Marston.
Leonard Shackford.
David A. Stevens.
Edward F. Belcher.
Luther Hapgood.
Simon D. Hiscock.
Thomas H. Lucy.
George S. Dudley.
Benjamin F. Higgins.
Daniel Callahan.
Dennis Corcoran.
Moses W. Hooper.
Amos Jones.
Patrick Doyle.
Alonzo S. Harriman.
Thomas W. Penney.
William Evans, Jr.
Charles A. Brown.
William McMenimen.
Rufus S. Downe.
Hugh McNamee.
Timothy Corcoran.
James E. Murray.
Thomas S. Hall.
William Nickelson.
Lawrence J. Ducey.
James S. Alexander.
Frank W. Scobey.
William Hawkins.
Warren A. Eaton.
Otis Dennison.
John W. Skelley.
Charles W. Priest.
Charles L. Pike.
Joseph H. Furbush.
William Gallagher.
Edward Brady.
Matthew R. Moore.
Jeremiah J. Delaney.

Orrin B. White. Michael J. Nolan.
Michael J. Conry. William F. Batchelder.
James M. Keaney.

Measurers of Wood and Bark.

John R. Taylor. Benjamin J. Hoyt.
William H. Hood. J. Henry Wyman.
Herbert T. Lawrence. Joshua S. Sanborn.
Thomas H. Matthews. Horace L. Porter.
Nathan L. Allen.

Pound Keepers.

Elisha S. Woodard. Thomas D. Cook.
William Twist.

Fish Officers.

Daniel A. Buckley. James M. Hilton.
Michael Corcoran.

Hay Weighers.

Timothy Sullivan. Nathan L. Allen.
William H. Dodge. Joshua S. Sanborn.

Coal Weighers.

James F. Jefferds. Jones Valentine.
Thomas H. Matthews. Alfred H. Wellington.
John E. A. Mulliken. Joshua S. Sanborn.
Patrick Kelley. Herbert T. Lawrence.
Geo. C. Gardiner. Leonard Bacon.
Walter F. Grieves. Horace L. Porter.
Silas E. Buck.

Weigher of Boilers and Heavy Machinery.

Joshua S. Sanborn.

Sealer of Weights and Measures.

Benjamin F. Nourse.

Deputy Sealer.

Conrad D. Kinnear.

Weighers.

Joseph W. Averill.
James H. Reardon.
Nathan H. Holbrook.
Henry Hooker.
Robert S. Paine.
Elisha S. Woodard.
George W. Wright.
Alvin M. Haines.
Henry James.
George W. Barnes.
John Reardon, Jr.
Joshua S. Sanborn.
Thomas Ralph.
Charles F. Hittinger.
Harry Hittinger.
Thomas H. Shea.

Inspector of Milk.

John H. Farrell.

Inspector of Vinegar.

John H. Farrell.

Surveyors of Mechanics' Work.

William S. Barbour.
William A. Mason.
John S. Pollard.
Arthur Hodges.
Charles A. Mason.

Measurers and Surveyors.

E. F. Young.
Henry L. Hale.

Inspector of Charcoal Baskets.

Benjamin F. Nourse.

Measurer of Grain.

Benjamin F. Nourse.

Inspectors of Junk-Shops.

Frederick W. Hagar.
Lothrop J. Cloyes.
John F. Murray.
Mark J. Folsom.
Frederick B. Pullen.
George H. Copeland.
William Evans, Jr.

Ward Officers.

Ward I.

WARDEN.
Edmund Miles.

CLERK.
John W. Sanger.

INSPECTORS.
John Q. A. Johnson.
George T. Barrington.
James A. Martin.

Ward II.

WARDEN.
James E. Hall.

CLERK.
P. Allen Lindsey.

INSPECTORS.
Edward W. S. Jones.
Horace G. Kemp.
Dwight M. Turner.

Ward III.

WARDEN.
Daniel B. Shaughnessey.

CLERK.
Silas E. Buck.

INSPECTORS.
James W. Sweetser.
James J. Garvin.
John J. Murphy.

Ward IV.

WARDEN.
Charles L. Russell.

CLERK.
Frank H. Teele.

INSPECTORS.
John Locke.
Peter J. Thorogood.
Elbridge G. Stevens.

Ward V.

WARDEN.
Charles L. Fuller.

CLERK.
Fred. E. Whiting.

INSPECTORS.
Sylvanus G. Griffin.
Joseph Newman.
Edgar H. Locke.

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